NOVEMBER 30, 1953

Fast Handling in a Flat Yard . . . p. 54

RAILWAY AGE

The Standard Railroad WEEKLY for Almost a Century

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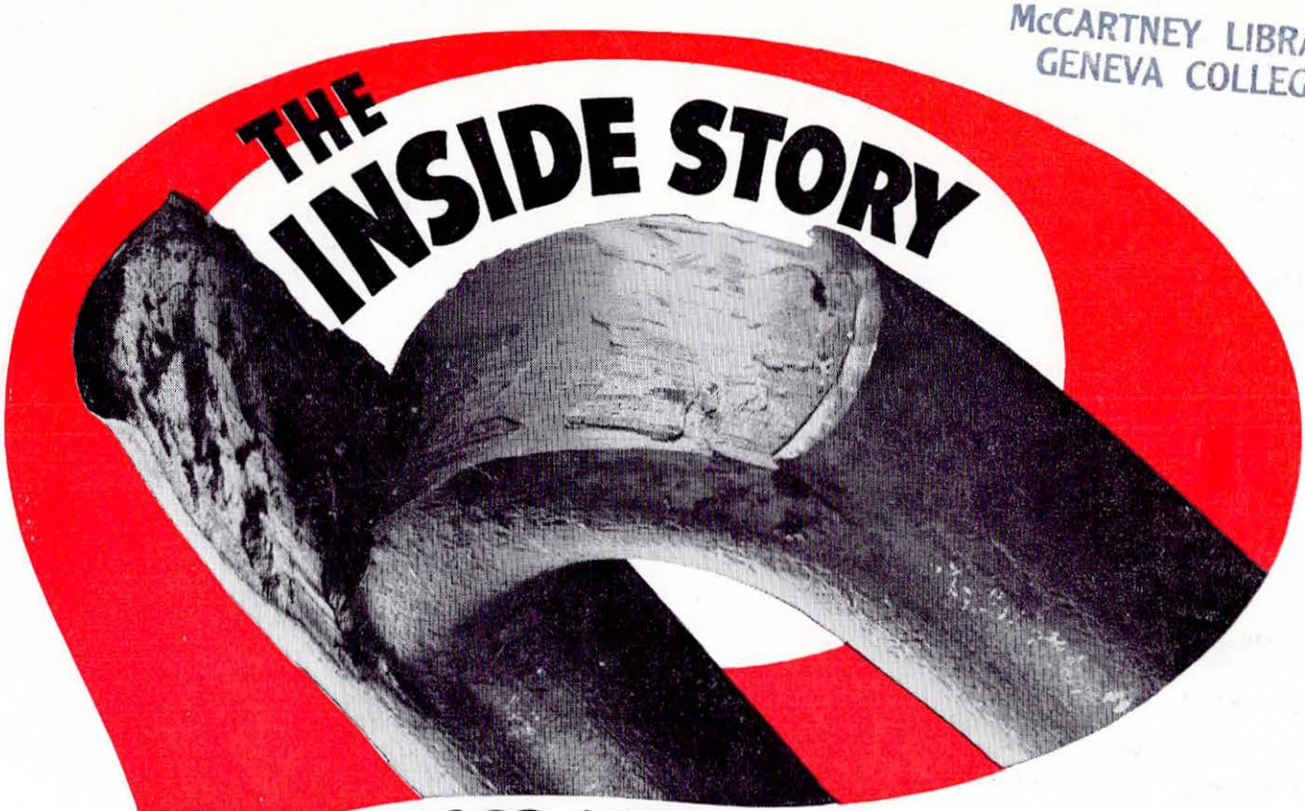

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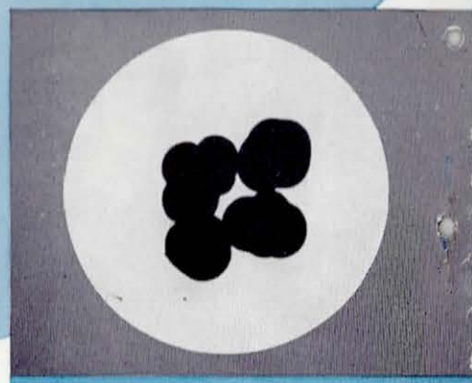
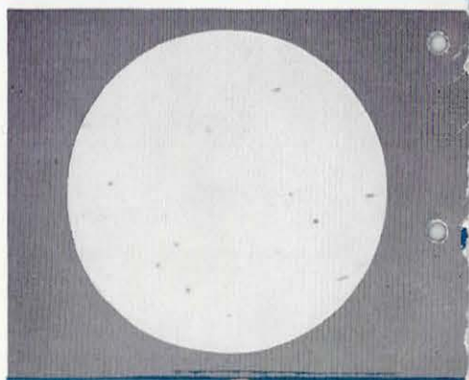
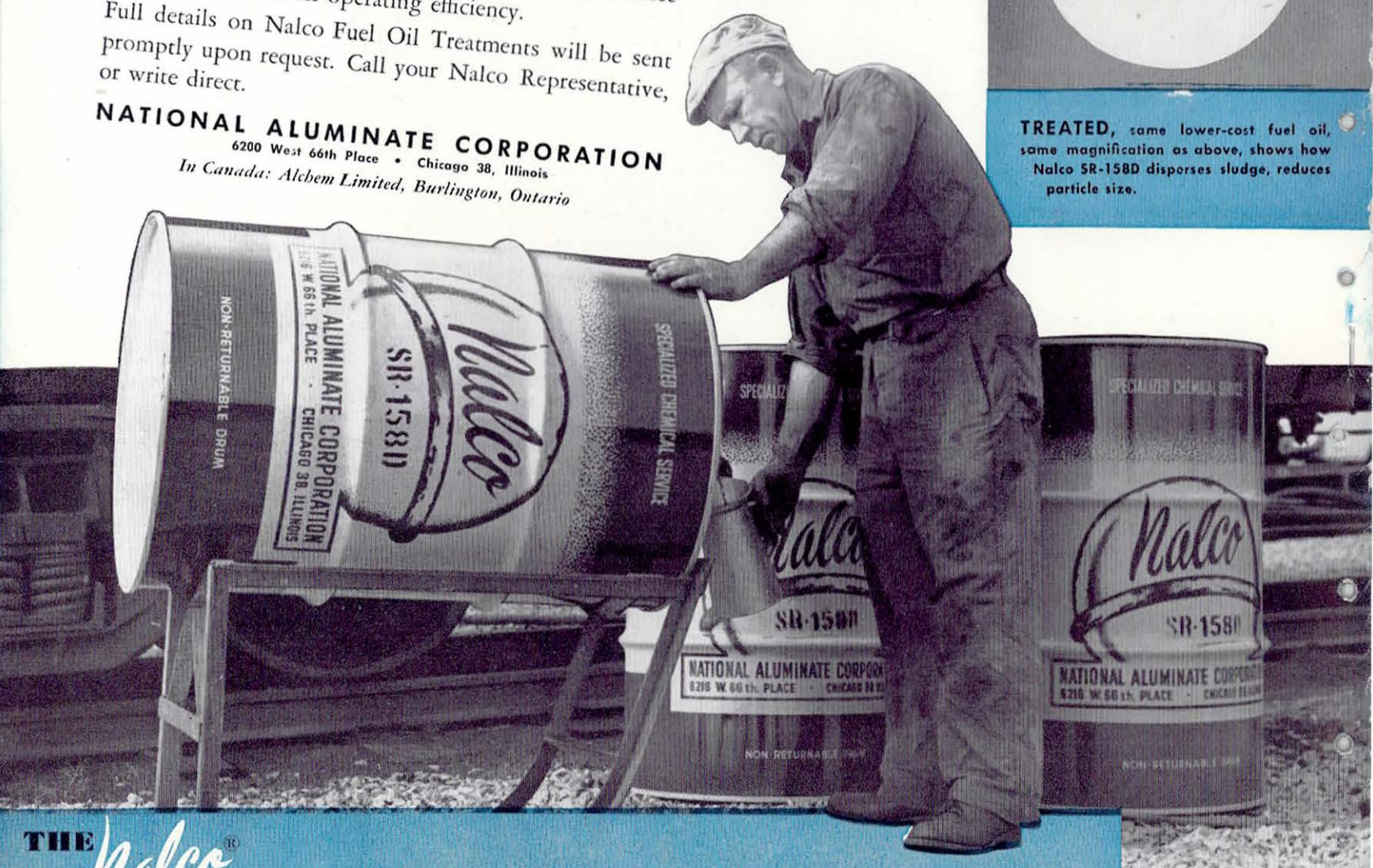


UNTREATED lower-cost fuel oil sample, magnified 8400X, shows objectionable sludge particles that cause poor combustion, clogged filters and sticking injectors.



TREATED, same lower-cost fuel oil, same magnification as above, shows how Nalco SR-158D disperses sludge, reduces particle size.



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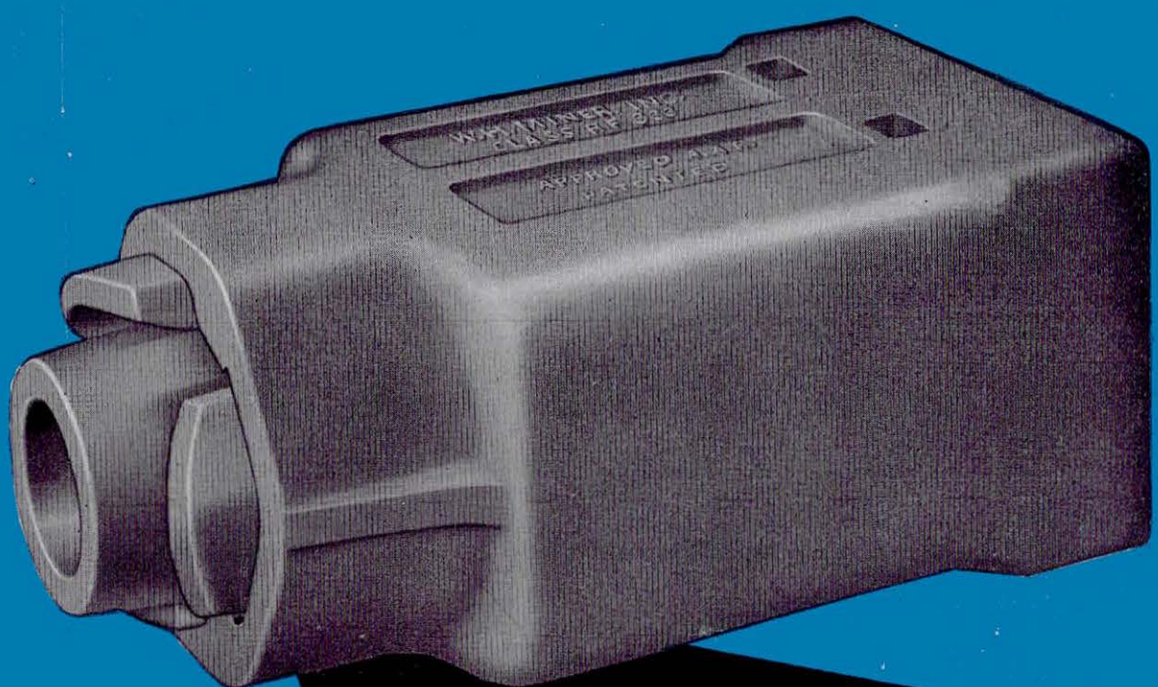

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RAILWAY AGE

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November 30, 1953 **Vol. 135, No. 22**

Week at a Glance

The freight car ownership goal has not yet been achieved, but progress toward it is substantial and commendable, A.A.R. President William T. Faricy told the association's annual meeting at Chicago. Meantime, Car Service Division Chairman Arthur H. Gass has reported an October increase in the serviceable fleet of 7,414 cars. **11, 13**

Nine RDC units add up to 38 trains on the B&M, where they are being intensively used in an effort to hold and regain passenger traffic. **11**

Modern yards pay off in improved service and handsome returns on net capital investment, the New York Railroad Club heard last week from D. W. Brosnan, operating vice-president of the Southern. **12**

Selling transportation to the Air Force may be a little easier if "tips to traffic solicitors" included in a recent talk by Brigadier General John P. Doyle are followed up. **14**

RAILWAY AGE FORUM

Should railroads or the I. C. C. direct rate policy? Or—why shouldn't managerial judgment be accorded greater weight in regulatory decisions? **49**

"Do Not Hump" as a placard on freight cars is obsolete, many people feel. What, if anything, should replace it? **50**

Readers can improve their reading matter—by realizing that publishing is a two-way business, with communication from reader to editor readily available. **50**

A diesel shop of the latest design at North Bay, Ont., now services Ontario Northland motive power. **51**

Current Statistics

Operating revenues, nine months	
1953	$ 8,082,250,257
1952	7,753,276,654
Operating expenses, nine months	
1953	$ 6,087,046,185
1952	5,973,064,639
Taxes, nine months	
1953	$ 972,804,921
1952	909,278,663
Net railway operating income, nine months	
1953	$ 845,430,758
1952	735,326,363
Net income, estimated, nine months	
1953	$ 651,000,000
1952	532,000,000
Average price railroad stocks	
November 24, 1953	59.11
November 24, 1952	65.85
Carloadings revenue freight	
Forty-six weeks, 1953	34,567,404
Forty-six weeks, 1952	33,831,955
Average daily freight car surplus	
Wk. ended November 14, 1953	20,641
Wk. ended November 15, 1952	3,459
Average daily freight car shortage	
Wk. ended November 14, 1953	1,858
Wk. ended November 15, 1952	7,183
Freight cars delivered	
October 1953	8,727
October 1952	5,437
Freight cars on order	
November 1, 1953	35,171
November 1, 1952	90,708
Average number of railroad employees	
Mid-October 1953	1,214,656
Mid-October 1952	1,249,919

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Week at a Glance CONTINUED

A $3¾-million terminal, built by the Seaboard Air Line at Savannah, has resulted in faster and more efficient handling of traffic, and better servicing and maintenance of motive power. **54**

A three-interlocking consolidation, using multiplex high-speed code, now controls heavy Lackawanna traffic through Newark, N. J. **59**

95-ton ore cars for four roads are now being delivered by the Pullman-Standard Car Manufacturing Company. **62**

More l.c.l. with no more men is the result obtained by the Texas & New Orleans from effective use of mechanical handling equipment and a rigid rule against "set back" cars. **63**

Talgo trains are popular in Spain, with a considerable volume of new patronage created, even at higher-than-average fares. **69**

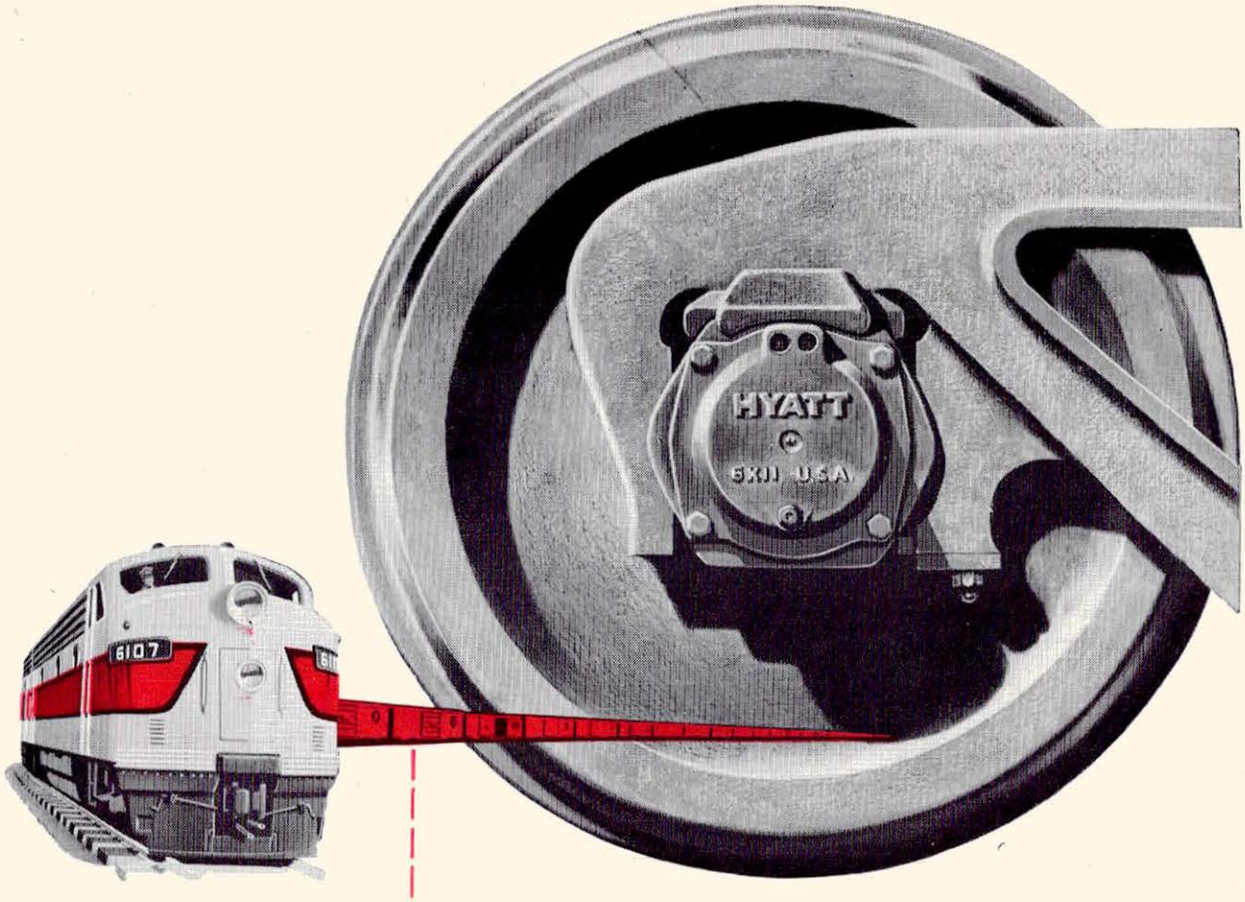
"Keep charges down," said shippers, as the National Industrial Traffic League considered car supply, rates and legislation at its annual meeting. **72**

Future prospects of the railroad carbuilding industry, probably bright enough for the long pull, are somewhat clouded for the near term, Pullman's Champ Carry has told New York financial analysts. **75**

BRIEFS

D.T.A. ponders problem of how to get railroads to purchase more freight cars. One possibility: Allow a greater portion of the purchase price to be written off in five years. Present rules permit fast write-off of 70 per cent, and some officials think this should be raised to 80 per cent or higher.

DF-Loader-equipped box cars owned by Class I rail-



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running mate of diesel freight

HYATT Roller Bearing Journal Boxes

Week at a Glance CONTINUED

roads, the armed services and private industry now total 8,757. This figure was reached with recent delivery to the Southern Pacific of 50 box cars which had been equipped with Evans DF Loaders at the Evans Products Company plant in Plymouth, Mich. SP cars fitted with the Evans load-locking, load-securing device now number 369.

I.C.C.'s Ogden Gateway decision's effective date has been postponed another 90 days—from January 7, 1954, to April 7, 1954. The postponement was at request of the court to which the case has been appealed.

Seeking a device to cushion coupling of freight cars, the Southern Pacific has engaged the Stanford Research Institute, Palo Alto, Cal., to act in a consulting capacity. President D. J. Russell of the SP hinted that a hydraulically-actuated shock absorber, built into the center sill of new cars, holds much promise. He said hydraulic action would increase the cushioning effect of such a device in proportion to the impact on the couplers.

California highway carriers, during October, paid fines totaling $4,555 in courts throughout the state for violations of the state public utilities code, reports the California Public Utilities Commission. Most of the 69 truckers convicted were operating as for-hire public carriers without having obtained permits from the commission. Fines ranged from $10 to $300.

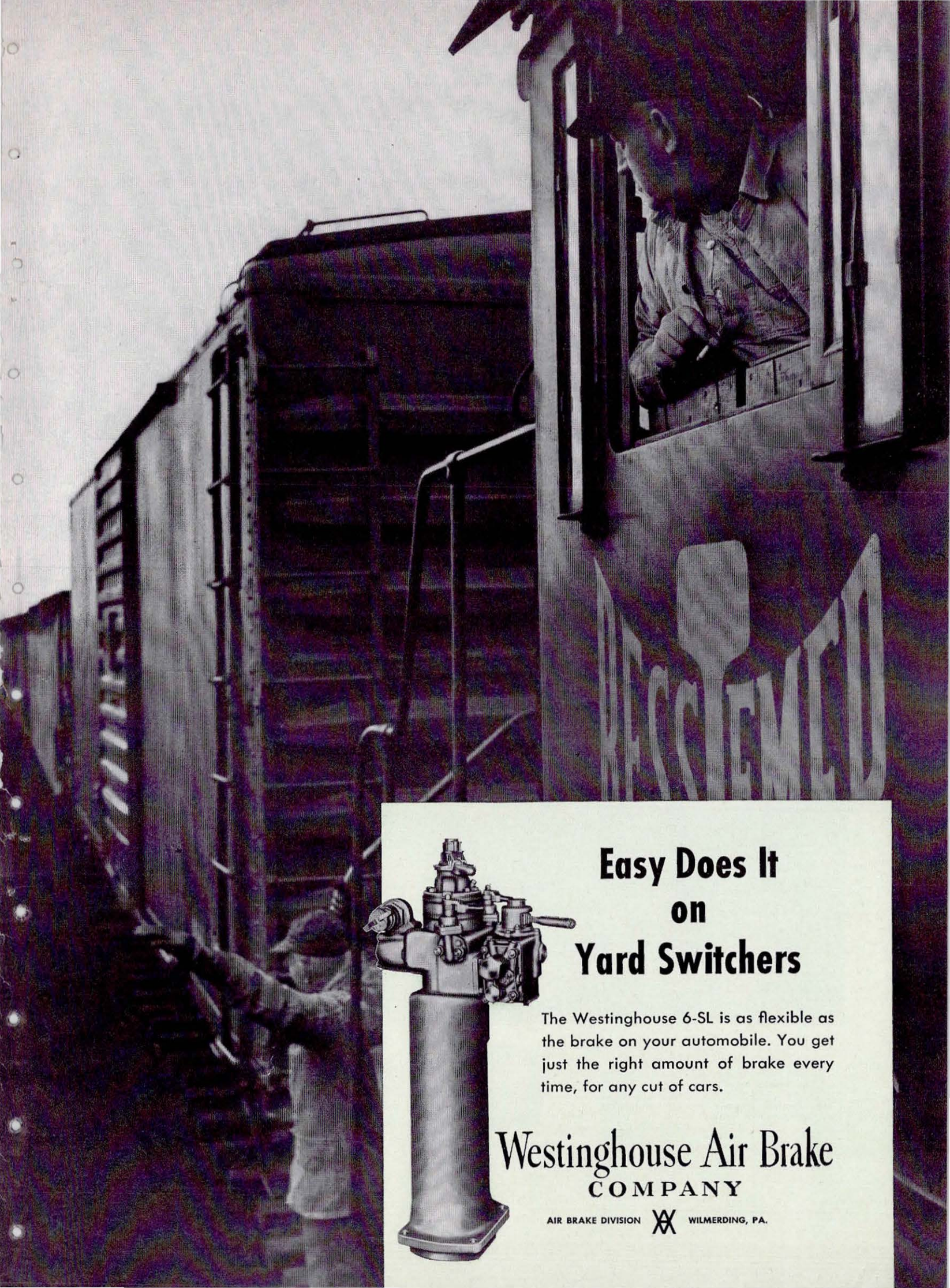
A highway trailer for bulk flour has been exhibited by the B. A. Eckhart Milling Company, Chicago. The vehicle might superficially be described as a "covered hopper trailer." It has a capacity of 44,000 lb., has a tandem rear axle, and is about 32 ft. long, 11½ ft. high and 8 ft. wide. Loading is by gravity through manholes at the top. Unloading is by motor-driven pumps that blow the flour through 4½-in. flexible pipes attached at the base of the hopper bin. It was built by the Gramm Trailer Company and the Fred D. Pfening Company, a bakery equipment concern.

All phases of "piggyback" operations are under intensive study by traffic executives of eastern railroads. There is some possibility that a definitive statement of the railroads' views may be forthcoming in the comparatively near future.

$100 per capita—that's how real estate taxes of the Milwaukee and Northern Pacific add up in Mineral county, Mont. The county has a population of about 2,100. The two railroads will pay $215,507 for their 1953 taxes there. A Milwaukee spokesman muses: "Preaching government ownership of railroads to these people would probably prove quite unpopular!"

Earnings of the St. Louis & O'Fallon were so good in the 'Twenties that they provided a basis for one of the leading cases under former recapture provisions of the I.C. Act. Now the O'Fallon is back before the commission, seeking authority to abandon its entire line. The reason? Inadequate earnings.

"Demurrage — Why it's in the tariffs and what to do about it," is the title of an easy-to-read pamphlet prepared by the Rock Island's public relations staff for use by local agents and station forces. Written in question-and-answer style and sprinkled with light-hearted cartoons, it is the first of a series intended to make employees feel more at home with tariff technicalities. Interstate Commerce Commissioner James K. Knudson liked the pamphlet so well he has asked the A.A.R. to distribute copies to top officers of member roads.



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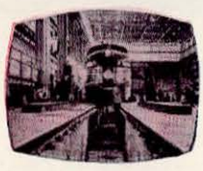
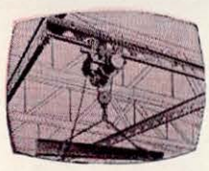
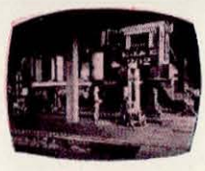


Drop Tables



Trambeam Overhead Handling Systems



Electric Jacks

Freight Car Goal in A.A.R. Spotlight

"It is yet to be achieved but progress has been commendable," says Faricy—Knudson addresses annual meeting

The nation's freight car supply, and the speed with which American railroads are approaching their goal of a 1,850,000-car fleet, held much of the spotlight during the annual meeting of the Association of American Railroads in Chicago November 20.

Toward the conclusion of the meeting, A.A.R. President William T. Faricy brought in James K. Knudson, Interstate Commerce Commissioner and defense transport administrator, who spoke to the members. While the meeting was closed to the press, Mr. Knudson and Mr. Faricy held a press conference directly afterward.

It will be impossible to forecast just when the actual goal of 1.85 million freight cars will be achieved, although it is quite clear that it will not be at the end of 1954, as originally envisioned, Mr. Faricy told newsmen. He said the program is now short about 70,000 cars, but that retirements cloud any attempt to forecast a completion date on the basis of new car orders alone. Pointing out that dieselization, larger cars, new yards and new methods mean greater utility of all cars in the fleet, he said the actual improvement was considerably beyond the 50,000-car increase accomplished "since that sunny Sunday morning when the Korean crisis broke in 1950."

Vigil—"Remember that in striving for this goal, the railroads can't levy any taxes and they can't print any money," he continued. "They have to live strictly from their 'gate receipts.' They can hardly face current labor demands, and the prospect of a material decline in the nation's business level, without these things affecting their individual discretion over car orders. With the exception of one railway system in Canada, this is the only nation on the face of the earth where private enterprise remains in the transportation picture. It remains there only because these railroad companies maintain a constant vigil over the dollars they spend. And that is as it should be."

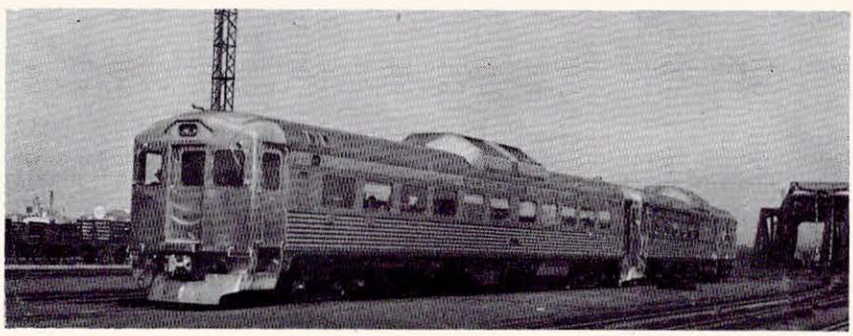
New Goals?—Mr. Knudson said "scant" roads would not be forced by government to bring their car fleets up to par under the ownership formula. But he added that government buying of freight cars must be avoided at all costs. "That is socialism," he said, "and I want no part of it."

Mr. Knudson hinted that atomic warfare may ultimately alter the sights on the freight car program. He said studies are being made of atomic warfare transportation requirements, but he declined to say whether they would ultimately raise or lower the nation's freight car needs.

Mr. Knudson also said he and Mr. Faricy were in accord as to the objective of the present program and that their differences were merely in the matter of timing. But he pointed out that carbuilders face a manpower problem if orders are not placed at a steady pace. "The real answer to the time element enigma is wrapped up in an oriental mind somewhere back of the iron curtain," he observed.

Reelected—All officers of the association were reelected by the new board of directors which met after the annual meeting.

New members of the board of directors are John M. Budd, president of the Great Northern, who succeeded G. A. MacNamara, president of the Soo Line; and John D. Farrington, president of the Rock Island, who succeeds Harry C. Murphy, president of the Burlington.



THIS B&M "HIGHLINER," consisting of two Budd-built rail diesel cars—an RDC-1 (left), and an RDC-3 (right)—makes four trips daily in each direction between Boston and Portsmouth, N.H.

Nine RDC's — Thirty-Eight Trains

Self-propelled units, operated singly or in combinations, enable Boston & Maine to provide intensive "Highliner" service on many runs

Four new "Highliner" weekday trains were inaugurated by the Boston & Maine November 16. The new service —one train each way between Boston and Portland, Me., and between Boston and Concord, N. H.—began shortly after delivery of the last two of nine rail diesel cars ordered from Budd.

The nine cars, representing an investment of approximately $1,550,000, now operate as 38 trains in what the B&M calls its "Highliner service."

It is hoped by the B&M that its new Boston-Portland train, called the "Businessman," will take many businessmen off the highways and put them back on the railroad. R. F. Cowan, B&M passenger traffic manager, says the train's schedule is "adapted to salesmen and will allow them to relax or do their paperwork en route." The train, two rail diesel cars operated in tandem, leaves Boston at 7:50 a.m. It features a stop at Wakefield, close to Highway route No. 128, at 8:04 a.m., and makes other stops at Exeter, N. H., and Dover, and at North Berwick, Me., and Biddeford, arriving in Portland at 9:55 a.m. Returning, the train leaves Portland at 3:30 p.m., making the same stops as the morning train, with arrival at Wakefield at 5:20 p.m., and Boston at 5:35 p.m.

The new train for Concord from Boston, utilizing the two "Highliner" cars operated earlier in the day as the "Businessman," leaves Boston at 6:30 p.m., with stops at Nashua, N. H. (7:13 p.m.), and Manchester (7:31 p.m.), and arrives in Concord at 7:55 p.m. It leaves Concord at 9 p.m., stopping at Manchester (9:26 p.m.), and Nashua (9:45 p.m.), and arrives in Boston at 10:30 p.m.

Modern Yards Pay Off

Widespread improvements in service, and high return on capital investment, realized from Southern yard construction program, Brosnan tells New York Railroad Club

"Improvement in service which is felt at many points hundreds of miles away," plus a return on investment which, in one instance and on one method of calculation, reached 80 per cent, have been the "pay off" for the Southern's postwar program of yard improvement, D. W. Brosnan, Southern's operating vice-president, told the New York Railroad Club November 23.

This yard rehabilitation program, Mr. Brosnan said, was based on a detailed study covering several months, which showed that traffic originating and terminating on the Southern system was spending 68 per cent of its total elapsed origin-destination time in yards, and only 32 per cent in road movement. For all traffic, corresponding figures were 52 per cent of elapsed movement time in yards, and 48 per cent on the road. The same study also pinpointed the "worst" spots—Knoxville, Tenn., and Asheville, N. C.

80% at John Sevier—On the basis of these findings, the Southern built its present John Sevier yard at Knoxville (*Railway Age*, August 6, 1951), designing it to handle work previously done both there and at Asheville, and virtually eliminating classification at the latter point. As a result, detention time has been reduced an average of 12 hours per car; per diem has been cut; fewer employees and fewer yard engines are required; and freight service to shippers has been vastly improved.

Cost of the Knoxville project, Mr. Brosnan said, was $4.8 million, including concurrent yard changes at Asheville. Even after allowance for interest and new operating expenses, not previously incurred, of about $533,000 per year, the net saving has exceeded 50 per cent on investment, or more than $2.4 million annually. When the capital cost is reduced by the value of diesel locomotives no longer needed at Knoxville and Asheville, and thus released for service elsewhere, the return on investment becomes about 80 per cent.

30% at Ernest Norris—The Southern's new $9-million Ernest Norris yard at Birmingham, Ala. (*Railway Age*, November 10, 1952), was credited by Mr. Brosnan with producing a return on investment of 21 per cent, which he said could be increased to 30 per cent when capital savings from release of 10 diesel locomotives and of industrial land valued at $1.6 million are considered.

These savings, he emphasized, are "money" savings alone, without consideration of "intangible benefits" re-

"It is high time we got out of our thinking the idea that the public owes us a living, or that we are indispensable to the public. We will live and prosper only as we provide a service the public can use at a price the public is willing to pay.

"Much can be done to minimize the amount of switching to be done in a railroad yard. Much of it is duplicated work, which costs a lot of money to delay and damage freight and to cause shipper dissatisfaction."
—D. W. Brosnan, vice-president (operations), Southern.

RETIREMENT OF CHAIRMAN J. A. DEPPE marked the October 16 meeting of the Arbitration Committee of the Mechanical Division of the Association of American Railroads. Mr. Deppe, whose retirement as superintendent car department of the Milwaukee was noted in *Railway Age*, October 26, had personally served on this committee for the past 15 years, while Milwaukee representation on the committee goes back to 1902.

Present at the committee meeting were (seated, left to right): T. J. Boring, general foreman, M.C.B. Clearing House, Pennsylvania; R. M. Smith, vice-president, Union Tank Car Company; N. G. Miller, chief clerk, Union Tank Car Company; A. H. Gaebler, superintendent car department, General American Transportation Corporation; H. L. Price, mechanical assistant—cars, AT&SF; V. R. Hawthorne, executive vice-chairman, A.A.R. Mechanical Division; Mr. Deppe; Fred Peronto, secretary, A.A.R. Mechanical Division; W. N. Messimer, general superintendent equipment, Merchants Despatch Transportation Corporation; R. E. Baker, assistant general manager, mechanical, B&M; J. W. Hart, chief draftsman, CNR; W. M. Herring, supervisor car inspection, Southern, retired; and G. J. Flanagan, general superintendent—passenger cars, NYC. (Standing, in the same order): J. J. Helle, assistant superintendent, St. Louis Refrigerator Car Company; R. W. Hollon, mechanical inspector, CB&Q; C. W. Kimball, supervisor car inspection, Southern; A. J. Schulte, lubrication supervisor, AT&SF; W. M. Keller, director of mechanical research, A.A.R.; H. M. Kamm, assistant to general superintendent equipment, Merchants Despatch Transportation Corporation; H. M. Wood, assistant chief motive power—car, Pennsylvania; L. T. Donovan, assistant to executive vice-chairman, A.A.R. Mechanical Division; and H. Belond, A.A.R. inspector, CMSP&P.

sulting from better service and, hence, increased shipper satisfaction. As typical of such service improvements, resulting at least in part from pre-classification of cars at Knoxville and Birmingham, Mr. Brosnan cited the fact that the Southern is now running substantially solid trains on such schedules as 16 hours for 640 miles between Washington, D. C., and Atlanta, Ga., and 32 hours for 1,200 miles between Washington and New Orleans.

Citico and Inman—Added cost savings and further service improvements are anticipated, he said, when the new Citico yard now under construction at Chattanooga, Tenn., is in operation. That yard is being designed to "work with" Norris, i.e., traffic from Norris northbound will be blocked on one track for Citico, and classified there; cars from Citico southbound will be blocked only for Norris, and classified there. Thus, major switching will be done at only one yard—not both. Tracks at Norris now used for classification work which is eventually to be done at Citico, will be released for pre-classification of cars for destination or connecting line delivery at New Orleans, ultimately saving additional classification time and expense at that point.

Some day, Mr. Brosnan added, the Southern expects to modernize or rebuild its Inman yard at Atlanta; and it has done, and expects to continue to do, considerable work at smaller yards at various points. All its larger yards are of the "pushbutton" variety, with the latest in classification, communication and inspection devices. "Pushbutton" yards, he said, "work well"; while communication is "everything."

Serviceable Fleet Gains 7,414 Cars

Two-year "high" in new-car installations coincides in October with heaviest monthly repair program of past year

Class I railroads and their car-line affiliates added 7,414 freight cars to their serviceable fleet in October.

This was reported by Chairman A. H. Gass of the Car Service Division, Association of American Railroads, in his latest review of "The National Transportation Situation."

The gain resulted when a two-year high in installations of new cars coincided with the heaviest monthly repair programs of the past year. The installations totaled 8,171 cars, more than in any other month since November 1951. Retirements totaled 5,045 cars, so the gain there was 3,126 cars.

Big Repair Programs—The other 4,288 cars of the month's 7,414-car gain came out of repair programs. The bad order backlog dropped from 99,046 cars, or 5.3 per cent of ownership, on October 1 to 94,758 cars, or 5.1 per cent of ownership, on November 1.

In reporting these developments, Mr. Gass identified the high-class-box-car situation as the "current number one car supply problem." Thus he thought it "interesting to note that 3,121 new plain box cars were installed in October. This too is a record since November 1951."

Loan Maturities Staggered—In other comment on the box-car situation, Mr. Gass reported that the Department of Agriculture has finally done something about staggering maturity dates of loans on the wheat crop. The plan, which will become effective with loans maturing in the spring of 1955, provides for February 28 and March 31 maturity dates. At present all loans on wheat mature April 30.

"The change," Mr. Gass said, "will permit movement of loan wheat 30 to 60 days earlier than in the past. It is hoped the new program will result in movement of a large part of the old wheat before the new crop movement, rather than moving the old crop simultaneously with the new crop, as has been necessary in the past.

"The Car Service Division has been working for several years to prevail upon the Department of Agriculture to change its method of scheduling the maturity of loans on a common date without regard to the varying harvest periods. The announced change does not fully reflect the recommendations made, but represents a major change in policy by the Department of Agriculture."

Reviewing current equipment conditions by types of cars, Mr. Gass predicted demands for high-grade and special-size box cars will continue heavy for some time. The supply of special type flats continues tight. The situation with respect to other types of cars was generally satisfactory.

As to freight car detention, the C.S.D. chairman said the usual checks indicated that 16.61 per cent of cars placed in October were detained beyond the free time of 48 hours. This compared with September's 17.2 per cent and 16.27 per cent in October 1952.

National Conference on Non-Destructive Testing

In addressing the third national conference on this subject, sponsored by the Magnaflux Corporation at Chicago, November 19 and 20, H. T. Cover, assistant vice-president and chief of motive power, Pennsylvania, paid tribute to modern test methods as a means of discovering defective conditions in railway track and equipment before trouble occurs, and in developing the improved materials and designs required for maximum safety in railway operation. Mr. Cover said Magnaflux and associated tests have increased on the Pennsylvania until this work is now being done with 56 test installations at 26 shops on the system, and averages about 130,000 axles of all types, tested each year; also 140,000 diesel parts and 38,000 non-ferrous parts a year.

Total attendance at the conference

RAILROAD SECTION of the new state rail-highway bridge over the Fore river at Portland, Me. (at left in photograph), was officially opened by the Portland Terminal, wholly owned subsidiary of the Maine Central, on November 15, when E. Spencer Miller, president of both roads, cut a ribbon at the east end of the bridge. The 1,200-ft. double track across the bridge was completed by MC track and signal crews in time to make the official opening on arrival at the trestle's east end of Train B-12, a 100-car freight train en route from Bangor to Rigby yards in South Portland. At the right is the old timber trestle which has been replaced in freight service by the new bridge. Passenger tracks on the old trestle also are to be cut over to the new structure.

was upwards of 100. Prepared discussions covering many technical phases of the subject were presented by two railroad mechanical department heads, six engineers of test, one wheel shop supervisor and six manufacturers' representatives.

Cleveland Union Terminal All-Diesel

Further progress in dieselization of the New York Central System resulted in discontinuance on November 16 of electrified train operation into and out of Cleveland Union Terminal.

Diesel road-switching units on that date took over the "steadily diminishing duties" of the Terminal's electric locomotives, which had been installed originally to eliminate steam locomotives from the city's downtown area. The nine diesels newly assigned to the Terminal will pull the few trains still arriving at or departing from Linndale with steam power, and also will perform switching work formerly done by electric locomotives in the Terminal zone.

Seven More Roads Enter Per Diem Case at I.C.C.

Additional railroads have been authorized by the I.C.C. to intervene in the per diem case now pending before the commission. These latest intervenors will support the so-called "comp'ainant" roads—those which are asking the I.C.C. to find per diem rates since 1949, including the present $2.40 rate, have been just and reasonable.

This latest group to enter the case include the Rock Island; Delaware & Hudson; Delaware, Lackawanna & Western; Erie; Southern Pacific; Texas & New Orleans, and Union Pacific. The per diem complaint was filed last September by the Burlington and 18 other railroad systems (*Railway Age*, September 28, page 11). The I.C.C. has scheduled its opening hearing in the case for December 8.

Traffic

Sales Tips for Traffic Men

Brigadier General Doyle outlines how he thinks carrier salesmen should develop their technique

Suggestions on how a traffic man can "sell" his carrier to the Department of Defense were outlined last week by Brigadier General John P. Doyle, director of transportation for the Air Force.

Speaking before the Washington, D. C., chapter of the National Defense Transportation Association on November 23, General Doyle discussed seven points which he thinks traffic representatives should embrace.

(1) Take a positive approach.—General Doyle said a carrier representative should come in with the idea of selling service and not to argue. The Defense Department is a shipper, the general said, and it cannot be held accountable for helping each form of transport and still manage its shipping business effectively.

If carriers are unhappy about Section 22, for example, they should try to get the law changed. The general said he is inclined to think that Section 22 provides "a good sales tool," but in any case a traffic man trying to sell the Air Force should not couch his presentation in terms of an argument against Section 22.

"We will use any legal rate that is quoted that is beneficial to the Air Force," the general declared.

(2) Know your service and your competition. — General Doyle said a traffic man should not only be thoroughly familiar with what his own carrier can do, but should know equally well what his competitor can do. Build your sales presentation on your own strong points, the general suggested.

(3) Know your market.—Many carrier representatives have not done a job of studying their market, General Doyle declared. He said Defense Department transportation needs are "enormous," and careful study of these needs will benefit both the carriers and the department.

(4) Know our objectives and requirements, and fit your service into them.—"It is amazing," General Doyle said, "how few carriers seem to know the transportation objectives of the Air Force." He said at least part of the blame lies with the department, which must help educate carriers as to its needs.

The wise use of transportation, he continued, can help the department cut overall costs, not by reducing transport costs particularly, but by permitting closer control of inventories. He said carrier representatives might do well to familiarize themselves with this problem, and use it in selling their service.

(5) Know about our operations.—Traffic men who must sell the Defense Department should acquaint themselves with the department's procurement and supply system, General Doyle declared. He said carriers should know the "complete organizational structure" of the department. This information is available and is not classified, he added; and it would help the traffic man know who to sell.

(6) Show us how you can benefit us.—It is the benefits you offer us that will clinch the sale, the general continued. Fast, dependable service is just one example. Place fast service on a dependable basis and we can use it, he said.

Changes in operating practices interest a shipper, and the traffic man should be quick to advise his customers, General Doyle added. He cited the current interest in "piggybacks."

HAGERSTOWN, MD., joined the increasing number of communities having a steam locomotive on display in a public park, when Western Maryland locomotive No. 202 was presented to the city for exhibition purposes. Built by Baldwin in 1912, the 4-6-2 locomotive was used in WM passenger service until its replacement by diesel power earlier this year.

He termed this development a "revolutionary concept" for bringing together the trucks and rail carriers.

"You would think they would tell the biggest shipper about such developments, but what we know of it we dug up ourselves," the general said. He said the Defense Department as a shipper is interested in all such things. "Let us know what you are doing," he said. "We may be able to use it."

(7) Present your offers in tangible form.—The Air Force general suggested that bids be submitted in brochure or other printed form, because a vocal presentation is often forgotten. He thinks the traffic representative who calls to leave his card is wasting time; the Air Force can use his aid and advice in trying to improve the management of its traffic.

Our door is always open for the traffic man to come in and sell us, General Doyle declared.

Yule to Raise Daily Mail Load to 250 Million Pieces

The railroads, beginning December 1, will carry a mail load that is expected to average nearly a quarter of a billion gift parcels and greeting cards every day up to Christmas, according to the Association of American Railroads.

The Post Office Department has estimated that during the 24-day pre-Christmas period this year, intercity mail—the great bulk of which is transported by railroad—will aggregate about 5,796,000,000 pieces, an increase of more than 3 per cent over the 1952 holiday season.

This is equivalent to delivering an average of more than one gift package or greeting card each day from December 1 until Christmas to every person in the United States, as well as to the entire populations of Canada and Mexico.

To move such a volume of holiday mail, the railroads must provide 3,760,162 sq. ft. of mail car space, according to estimates of the Post Office Department. This footage is equivalent to 62,669 standard-sized mail cars exceeding 60 ft. in length. These cars, in turn, would make up in excess of 5,200 solid mail trains of 12 cars each.

Sacks of mail to be delivered this year by railroad are expected to reach 56,823,500, an increase of more than 2,000,000 over the number handled a year ago. In order to eliminate crowding of limited floor space at many of the large post offices and terminals, the railroads must accelerate transportation of holiday mail throughout the 24-day period. To accomplish this, they expect to press extra cars into service.

In addition to speeding gift parcels and greeting messages from coast to coast, the railroads are prepared to handle thousands of cars of express and freight loaded with Yuletide merchandise, the A.A.R. said.

"PIGGYBACK"—OR WHAT?

"While the proposal to move more and more highway trailers on railroad flat cars on certain routes is heartily endorsed by wide sections of the rail industry, use of the term 'piggyback' to describe the operation is being objected to by many in rail management. In spite of the fact that the term seems to describe the procedure graphically and completely, it is regarded as 'undignified' or 'too colloquial' by its opponents. The objection seems scarcely valid in view of the widespread public attention attracted to some degree by the term itself. And, to date, the scramble to find a substitute has produced none. Any ideas?"—*From the New York Herald Tribune, November 20.*

Law and Regulation

Top Postwar Problem "Passé"

Threat of "irresponsible attacks" on anti-trust grounds no longer serious, Faricy tells R.B.A.—Association expands help to industry

The threat of irresponsible attacks, on anti-trust grounds, from government agencies is no longer the serious problem for the railroads it was a few short years ago, declared W. T. Faricy, president of the Association of American Railroads, in an informal talk before the 45th annual dinner of the Railway Business Association in Chicago November 20. Some 860 top-ranking officers of railway supply companies and their guests from the roads heard the A.A.R. head contrast the railroads' present outlook with that he outlined in his first speech before R.B.A.—back in 1947.

At that time, he recalled, he believed the foremost problem confronting the railroads to be "the persistent series of attacks being made on the industry by the Anti-Trust division of the Department of Justice." He promised then that the railroads would "gird their loins for an all-out fight" and that "we are organizing our defenses with the best lawyers in the industry, and, given a fair trial, have no fear of the outcome."

In contrast, today, he declared, "The Lincoln anti-trust case has passed into history, with a complete dismissal by the government of all its charges against the railroad industry. The Bulwinkle Bill, so vigorously opposed by the Department of Justice, has been enacted into law, and is now on the statute books. The Georgia rate case, in which the Department of Justice intervened, has likewise passed into history, with a dismissal and a complete vindication of the railroad industry. The reparations cases are still with us, but the examiner has made a favorable report after years of hearings, and his report, if sustained by the Interstate Commerce Commission, will vindicate the railroad industry. . . .

"Whatever may lie ahead, these railroads, with your help and on the basis of past performance, are successfully meeting and overcoming obstacles, and will be ready to take on the troubles that we may yet encounter down the line."

Two of the planks of the R.B.A.'s legislative platform have been caught up with by events, declared Norman C. Naylor, chairman of R.B.A.'s executive committee, and president of Union Asbestos & Rubber Co. Because the Federal Barge Line has been sold to private interests, the plank which advocated its dissolution has been removed from the association's program. Another plank—having to do with government reparations claims—"is wearing thin." R.B.A. will continue, nevertheless, to recommend that the allowable period for filing suits be reduced to one year.

Recalling that, since its organization in 1908, the association—restricted to those who sell goods or services to the railways—has "advocated a fair deal for its railway customers," Mr. Naylor declared: "The R.B.A. has always operated in the open. It has no underground. All its statements and recommendations go regularly to every member of both houses of Congress. As an important part of its work, the R.B.A. has always maintained close contact with local business groups, as well as with the large national organizations."

To intensify its activities, the R.B.A. is enlisting individual members in its campaign to form local groups in strategic locations to supplement the work of the association's president and his staff. A group has already been organized to cover the New York-Philadelphia-New England area, under the leadership of James G. Lyne (editor of *Railway Age*) and Maurice Trainer, (vice-president, American Brake Shoe Company).

A Chicago group has been organized

under the leadership of George Green (vice-president, Pullman-Standard Car Manufacturing Company) and Arthur Williams (president, Standard Railway Equipment Company). Both of these groups are ready to function. In a short time similar groups will be formed in Cleveland, Pittsburgh and other locations where, it is believed, effective work can be done.

The R.B.A. chairman called for "common sense" in interpreting railway problems—in simple language by those whose motives "cannot be maligned as merely propaganda."

Members added to the governing board of R.B.A. during the past year comprise: Mr. Green, Norman W. Foy, vice-president of Republic Steel Corporation, and Max K. Ruppert, first vice-president, Poor & Co.

Suppliers Urged to Back Realistic Transport Policy

If government did not finance railroad competitors with taxpayers' money all transportation would be on an equal, competitive basis, prices would find their true levels, transportation service would improve, and the buyer would be winner in the long run, Milton G. McInnes, Erie operating vice-president, said in Chicago November 20.

Speaking at a luncheon of the Union League Railway Supplymen's Association, Mr. McInnes asked his audience to join with railroads in advocating a more realistic national transportation policy to overcome the outmoded and unequal regulation under which railroads operate today. "If I were in the steel business, or oil industry, or lumber industry, or any other field considered a railroad supplier," he said, "then I would feel that the rise or fall of American railroads would be as important to me as to the railroad industry itself."

New Diner Rules End Race Separation Case

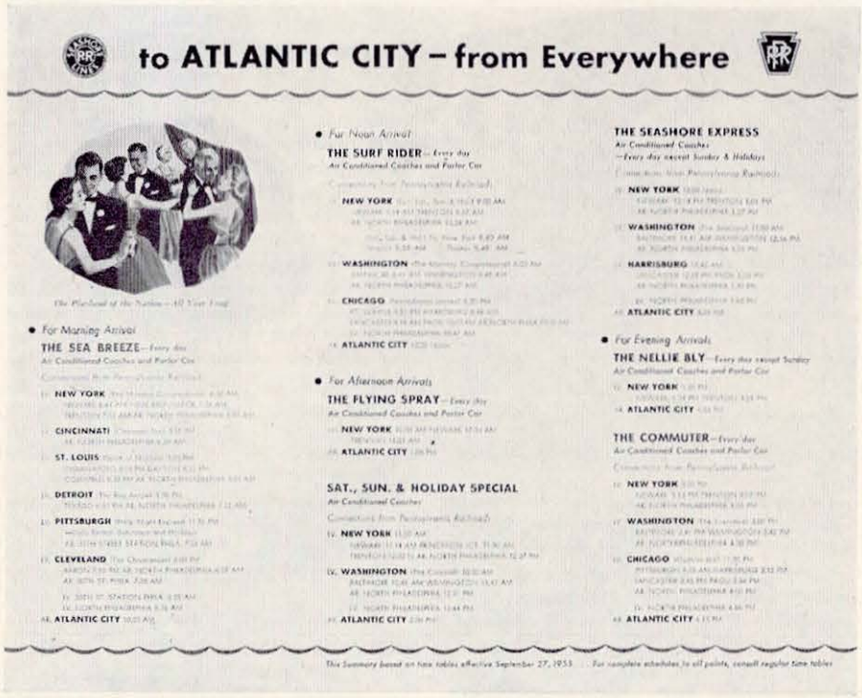
Issuance by the Southern of revised rules governing service to patrons of its dining cars has ended the much-litigated Henderson case involving separation of white and Negro passengers.

This has been announced by the Department of Justice which went into the court proceedings on the side of the complainant, Elmer W. Henderson, and thus failed to support I.C.C. rulings upholding the Southern diner rules under attack.

The case, based on a diner incident occurring in 1942, went to the United States Supreme Court. In a June 5, 1950 decision that court held that refusal to serve Negro passengers at unoccupied places in a diner constituted unlawful discrimination in violation of the Interstate Commerce Act. (*Railway Age*, June 10, 1950, page 71.)

Thereafter the Southern revised its diner rules. (*Railway Age*, November 18, 1950, page 69.) Complainant Henderson, however, remained unsatisfied and sought an injunction against the new rules. The Department of Justice remained at his side supporting that plea which has been before the United States District Court for the District of Columbia since March 1952.

It was this suit that was withdrawn on the basis of the latest revision of the Southern's diner rules. That revision rewrote the rules to require that passengers seeking service shall be seated in the order of their entrance into the diner.



THIS EASY-TO-READ TIMETABLE, attractively printed in four colors, is now available for Atlantic City services of the Pennsylvania-Reading Seashore Lines. For each individual train, named in red, the table shows, separately, general time of arrival (morning, afternoon, etc.); days on which the train operates; types of equipment carried; names and departure times of connecting Pennsylvania Railroad trains from all principal PRR points; P-RSL departure time from Philadelphia; and exact arrival time at Atlantic City. The same information is shown on the other side of the timetable for trains leaving Atlantic City. The table, only part of which is reproduced here, folds to pocket size—9 in. by 3¾ in.

Figures of the Week

Freight Car Loadings

Revenue freight car loadings for the week ended November 21 were not available when this issue of *Railway Age* went to press.

Loadings of revenue freight for the week ended November 14 totaled 727,058 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, November 14

District	1953	1952	1951
Eastern	120,190	138,280	134,625
Allegheny	140,444	160,361	162,029
Pocahontas	52,654	64,398	65,850
Southern	123,951	131,625	134,212
Northwestern	106,212	135,430	115,455
Central Western	123,541	135,251	135,804
Southwestern	60,066	63,405	66,283
Total Western Districts	289,819	334,086	317,542
Total All Roads	727,058	828,750	814,258
Commodities:			
Grain and grain products	48,490	52,413	53,109
Livestock	12,685	15,693	11,289
Coal	128,527	152,853	167,727
Coke	11,933	14,685	16,297
Forest products	44,223	43,839	44,682
Ore	49,510	80,605	56,508
Merchandise l.c.l.	66,929	73,980	72,783
Miscellaneous	364,761	394,682	391,863
November 14	727,058	828,750	814,258
November 7	747,868	829,295	791,403
October 31	780,863	862,116	837,617
October 24	804,413	760,773	864,800
October 17	822,539	838,408	886,648
Cumulative total 46 weeks	34,567,404	33,831,955	36,265,865

September Accidents

The I.C.C. has made public its Bureau of Transport Economics and Statistics' preliminary summary of "steam" railway accidents for September and this year's first nine months.

The compilation, subject to revision, follows:

Item	Month of September 1953	1952	9 mos. ended with Sept. 1953	1952
Number of train accidents*	799	835	6,846	7,376
Number of accidents resulting in casualties	49	34	404	387
Number of casualties in train, train-service and non-train accidents:				
Trespassers:				
Killed	108	105	786	780
Injured	89	83	760	747
Passengers on trains:				
(a) In train accidents*				
Killed	..	..	20	.
Injured	..	1	432	174
(b) In train service accidents				
Killed	1	1	16	9
Injured	148	114	1,352	1,308
Travelers not on trains:				
Killed	1	..	6	8
Injured	84	52	603	530
Employees on duty:				
Killed	22	30	227	260
Injured	1,604	1,767	14,713	15,025
All other non-trespassers:**				
Killed	127	115	1,145	1,082
Injured	430	451	3,861	3,874
Total all classes of persons:				
Killed	259	251	2,200	2,139
Injured	2,355	2,468	21,721	21,658

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $325 or more to railway property in 1952. Beginning January 1, 1953, this minimum was raised to $350. Only a minor part of the total accidents result in casualties to persons, as noted above.

Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties **for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	114	104	1,056	960
Injured	300	271	2,539	2,515

People in the News

C. A. Miller Dies

Clarence A. Miller, 63, vice-president and general counsel of the American Short Line Railroad Association, at

Clarence A. Miller

Washington, D.C., died November 21 at Doctors Hospital in that city.

Mr. Miller was born at Fairchance, Pa., February 11, 1890, and attended George Washington University (LL.B., 1919, LL.M., 1921). He practiced law prior to joining the A.S.L.R.A. in 1931. He was the author of "Legislative Evolution of Interstate Commerce Act" (1931), "I.C.C. Law and Procedure" (1939), and "Anecdotes of the Literary Club (of Samuel Johnson's time)" (1948).

Rates & Fares

Drought Rates on Hay Extended in All Areas

Railroads in all territories have set back to December 31 the expiration dates of their drought-relief rates on hay moving into "disaster" areas.

Action to that effect, which was taken by eastern roads, was reported in *Railway Age* November 23, page 13. Like action was also taken by railroads in Southern, Western and Illinois territories.

Norfolk-Toledo Rate On Ore Can't Be Cut

The Interstate Commerce Commission has refused to approve a rate reduction proposed by the Chesapeake & Ohio and Virginian on import iron ore moving from Norfolk, Va., and Newport News to Toledo Docks, Ohio, for transshipment by lake vessel.

The proposed rate of $2.91 per long ton would have represented a reduction of 60 cents in the present rate of $3.51. Also, it would have effected parity with the rate on import iron ore moving from Baltimore, Md., to Cleveland, Ohio.

The commission found that the C&O and Virginian had not met the burden-of-proof requirement imposed on carriers proposing changes in rates. The decision by Division 2 was in I. & S. Docket No. 6086.

I.C.C. Told to Leave Parity In Ex-Lake Grain Rates

The Interstate Commerce Commission has been advised by Examiner M. L. Boat to leave freight rates on ex-lake grain moving from Buffalo, N. Y., and Oswego to six Atlantic ports on the present parity basis. The advice was embodied in a proposed report in I. & S. Docket No. 5641.

The report deals again with a controversy which was passed upon by the United States Supreme Court in December, 1951. The court struck down a commission order which was designed to maintain the previous set-up whereby rates on the ex-lake grain moving to Albany, N. Y., New York City, Boston, Mass., and Portland, Me., for export, were differentially higher than the rates to Philadelphia, Pa., and Baltimore, Md. (*Railway Age*, December 10, 1951, page 17.)

RESOURCES of the National Defense Transportation Association, with a membership of over 10,000 representatives of all branches of transportation, have been placed at the disposal of the American National Red Cross for use in disaster relief emergencies. Agreement to that effect was signed by E. G. Plowman (seated, left), president of the N.D.T.A., and E. Roland Harriman, Red Cross board chairman. Standing, left, is Brig. Gen. Calvin DeWitt, Jr., commanding general, New York Port of Embarkation, and, right, Rear Admiral Redfied Mason, commandant, Atlantic division, Military Sea Transport Service.

Parity vs. Differentials—Pursuant to the court determination the parity basis was established January 29, 1952, and has been in effect since. Railroads interested in the former differential set-up then filed tariffs designed to restore that set-up and the "parity parties" countered with tariffs designed to maintain that set-up. These tariffs were suspended and are under investigation in the proceeding out of which Mr. Boat's proposed report has come. Also involved is the reasonableness of the rates whereby parity was established, the original case having been reopened for further hearing on that issue.

Mr. Boat would have the commission find that the rates which established parity are reasonable and otherwise lawful, meanwhile requiring that the suspedned tariffs be canceled.

. . . **First scholarship** endowed by funds of the Steam Locomotive Research Institute, dissolved last year because of the extent to which steam is being replaced by diesel power on the nation's railroads, has been awarded at Stevens Institute of Technology. The award, for benefit of young men of railroad families, went to John J. Knochel, son of a brakeman on the Central of New Jersey. The scholarship fund was established with $40,000 remaining in the treasury of the research group when it went out of existence.

Organization Helps Chief Clerks

Washington group, representing 27 railroads, fosters harmonious relations between railroads and employees; emphasizes industry's significance to public

New officers of the Chief Clerks' Association of Washington, D.C., were elected at the organization's business session November 6. W. M. Taylor, Northern Pacific, was named president for the coming year. Others elected were Virgil Schenck, Southern, vice-president; Curtis Jones, Cotton Belt, secretary, and William E. Dove, Monon, treasurer.

ESTON W. OYLER (left), chief clerk to Washington representative of the Santa Fe, and president of the Chief Clerks' Association during its first four years, is given a large part of the credit for founding and firmly establishing the organization.

MEMBERS of the Chief Clerks' Association of Washington, D.C., visited Potomac yard, Alexandria, Va., November 5. It was the latest in a series of "educational tours" which the organization sponsors to help members become more familiar with railroad operations. Pictured at the beginning of their Potomac yard tour are the following chief clerks, with officers of the yard:

Front row, left to right: G. A. Kidwell, master mechanic; W. H. Shoemaker, track supervisor; R. L. Slate, special agent; and G. A. Shepherd, agent, all of Potomac yard; Ben Miller, Association of American Railroads; Leslie Roberts, chief clerk to agent; F. M. Becker, chief clerk to master mechanic; John J. Newbauer, chief clerk to superintendent; A. M. Butler, chief clerk to manager; R. M. Zimmerman, terminal inspector, and C. E. McCarty, manager of Potomac yard.

Second row, left to right: Lee Borah, A.A.R.; J. W. Kizzia, *Railway Age;* Mike Curtin, Missouri-Kansas-Texas; Carroll Wilkie, Western Pacific; Charles Pugh, Seaboard Air Line; F. P. Blackard, Norfolk & Western; Curtis Jones, Cotton Belt; George Wallace, Denver & Rio Grande Western; Ken MacFarlane, New York Central; Virgil Schenck, Southern; Jim St. Andrew, Rock Island; Joe Robinson, Chesapeake & Ohio; George Schroeder, Pennsylvania; Jack Parr, Southern, and Ken Gagnon, Baltimore & Ohio.

On steps, from top, left to right: Carl Chewning, Union Pacific; Wes Taylor, Northern Pacific; Ray Ashe, Milwaukee; Leon Utterback, Illinois Central: Jim McClellan, Erie; Bill Dove, Monon; Bill Schaeffer, Great Northern; Howard Ahrens, Santa Fe; Larry Barbeau, Milwaukee; Dale Hooper, A.A.R., and Ken Howes, Atlantic Coast Line.

The C.C.A., a four-year-old organization, was formally established in 1949, and currently has 32 regular members, representing 27 railroad offices in Washington. There are, in addition, 10 "associate" members—chief clerks who have been promoted or transferred.

Eston W. Oyler, chief clerk to the representative of the president, Santa Fe, served as president of the organization from 1949 until the recent election. Members of the association give Mr. Oyler major credit for helping start C.C.A. and for guiding its subsequent growth.

Purpose of the clerk's association is to bring together men of similar assignments, to help them become better acquainted and promote their mutual interests in transportation. The C.C.A. constitution puts it more broadly: "To foster more harmonious relations between railroads and railroad employees, and to emphasize the significance of the railroad industry to the American public."

One major activity of the Washington group has been the sponsorship of "educational tours" for its members. Most recent such tour was on November 5, when the group spent an afternoon inspecting facilities at Potomac yard, Alexandria, Va. Earlier this year they made a similar visit to the Washington Terminal Company.

Members of C.C.A. hold an informal luncheon meeting each week, and a formal business session four times a year. James F. McClellan, Jr., Erie, is editor of a monthly newsletter published by the association. The letter currently has a circulation of about 100.

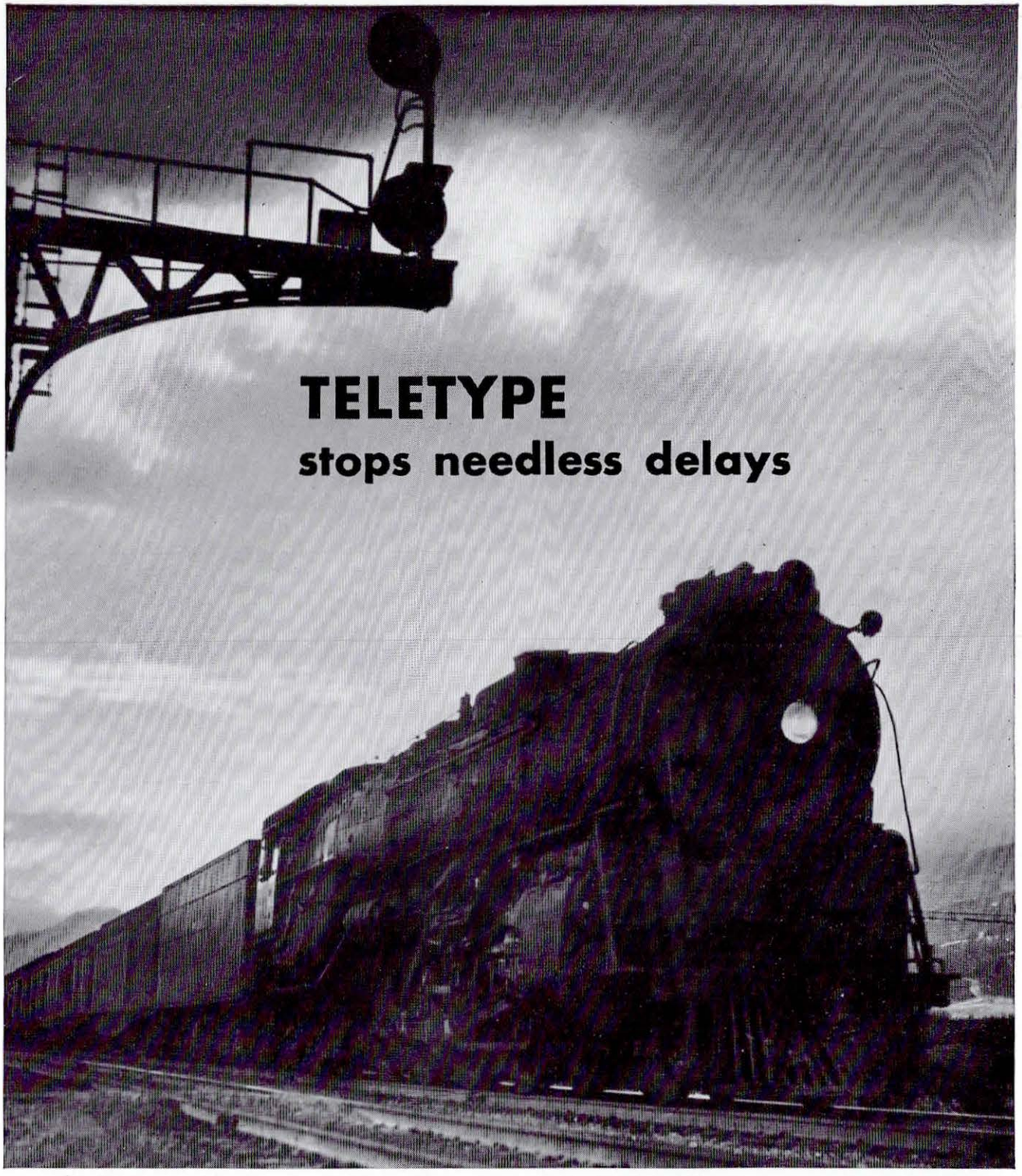
Paul W. Johnston, president of the Erie, has been elected a member of the **National Industrial Conference Board** for a one-year term.

Herschel A. Hollopeter, director of transportation, Indiana State Chamber of Commerce, has been elected a member of the board of directors of the **Transportation Association of America.**

The **Trans-Missouri-Kansas Shippers Board** will hold its 99th regular meeting at the Connor Hotel, Joplin, Mo., December 2-3. J. H. Hays, general counsel of the Association of Western Railways, will be guest speaker at a luncheon session December 3, to be held jointly with the **Tri-State Traffic Club** and the Joplin Chamber of Commerce.

The following officers were elected at a meeting of the **New York Railroad Club** November 23: President (for a two-year term), F. B. Hank, general manager, New York Central; first vice-president, A. E. Kriesien, assistant vice-president and general manager, Erie; second vice-president, C. F. Bayer, manager purchases and

(*Continued on page* 75)



When paperwork delays are stopped by Teletype, needless train delays are stopped, too. That's why 59 of the nation's leading railroads depend on Teletype printed communications to keep traffic moving on time.

TELETYPE
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CORPORATION
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Western Electric Company
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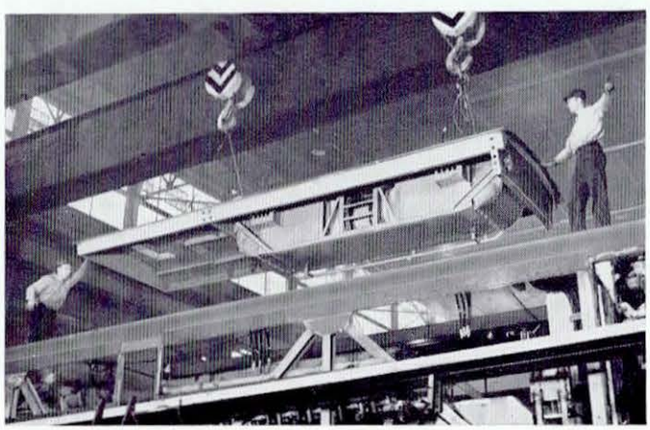
"Dynamic Braking saves up to 20 minutes on a single 120-mile run"

. . . says T. H. Evans, Chief Mechanical Officer, Missouri-Kansas-Texas Lines

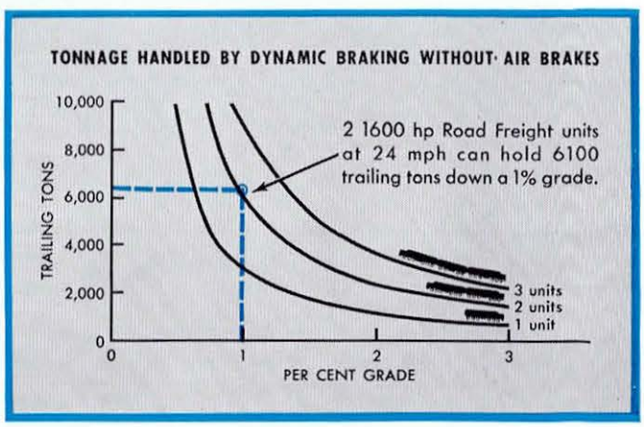
"On the Katy," Mr. Evans points out, "we use dynamic braking for speed control—even on flat terrain—to keep our freights moving faster by avoiding delays from automatic brake-release—for holding speeds *up* as well as *down*. This adds up to better service for our shippers, and lowered operating costs for the Katy.

"We instruct our engineers to use dynamic braking wherever possible—particularly on the longer, heavier trains. On some subdivisions we never use air, not even for yard stops. Dynamic braking keeps the cars bunched up well against the locomotive and materially reduces the number of break-in-twos. Since it varies only with the speed of the train, dynamic braking eliminates all other variables in braking any train—including the human element.

"What's more," Mr. Evans adds, "dynamic braking gives us 120,000 miles per wheel before the first turning. We almost never have to replace rigging, and our brake shoe wear is less than 25 per cent of what it used to be. *Alco's dynamic braking is particularly effective—it gives exceptionally flexible application and release and permits higher current rating.* On the Katy, we call dynamic braking 'the engineer's friend.'"



Extremely compact blower-resistor assembly — one of two main dynamic braking components—fits into locomotive roof hatch, out of way of other equipment. Unit dissipates energy from sturdy traction motors faster, more efficiently.



These curves show clearly the outstanding efficiency of dynamic braking on Alco locomotives. They are based upon 1600-hp road freight or passenger units moving at 24 mph with 65 mph gearing and cars averaging 50 tons each.

Alco

AMERICAN LOCOMOTIVE

Alco road freight diesel-electrics with automatically controlled dynamic braking speed service on the KATY

Alco Dynamic Braking Means Faster Schedules Over Any Kind of Terrain

- Alco dynamic braking offers you faster schedules plus speed control over flat terrain—in addition to exceptional braking power on steep grades.
- Alco dynamic braking greatly reduces the need for air braking—even for yard stops or on steep grades. Thus it (1) eliminates delays caused by automatic air-brake releases, (2) reduces costly, time-consuming break-in-twos, (3) eliminates stops to set retainers before descending steep grades, and (4) reduces number of stops required for routine inspection and wheel cooling.
- Peak rating of 900 amperes from traction motors on freight and passenger locomotives in braking operation—not exceeded by any other manufacturer—lets motor run constantly without overheating.
- Alco dynamic braking, besides making possible faster, smoother train handling, reduces chances of derailment through thermally cracked wheels.
- Alco automatic control assures accurate, constant braking effort at all speeds without overloading grids or traction motors.

SUPERIOR ADVANTAGES OF DYNAMIC BRAKING ON ALCO LOCOMOTIVES

. . . . Unmatched heat dissipation on dynamic braking equipment for holding larger tonnages smoothly on heavy grades.

. . . . Faster, more flexibly controlled release and response provide smoother train handling.

. . . . Accurate, constant braking effort *automatically* maintained at correct value without exceeding capacity of braking system.

. . . . Each Alco dynamic braking unit is completely self-contained—dynamic braking equipment in any single unit of a multi-unit locomotive can operate independently of the others, thus providing greater safety.

COMPANY

Sales and Service Offices in New York, Chicago, Cleveland, St. Louis, San Francisco, and Washington, D. C.

Superior dynamic braking is but one of the many cost-cutting, efficiency-boosting features that make Alco diesel-electric locomotives your best buy in motive power.

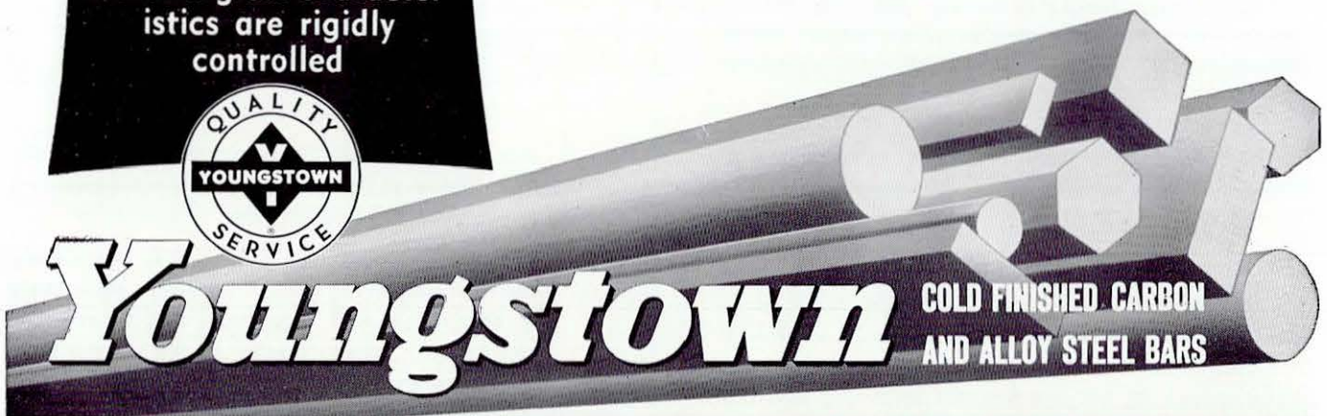
YOUNGSTOWN
Cold Finished
CARBON AND ALLOY STEEL BARS
Uniformly satisfactory in service because—
Machinability is outstanding
Tolerances are uniformly close
Metallurgical characteristics are rigidly controlled

QUALITY YOUNGSTOWN SERVICE

FOR TOP QUALITY BARS

●ALL steel for Youngstown Cold Finished Bars is of predetermined analysis—produced in the open hearth by closely controlled blending and refining of raw materials. Rigid control from ore to finished product results in uniform dependability.

Youngstown Cold Finished Carbon and Alloy Steel Bars are furnished in standard shapes and sizes, in either coils or straight lengths. For further information, phone or write our nearest District Sales Office.

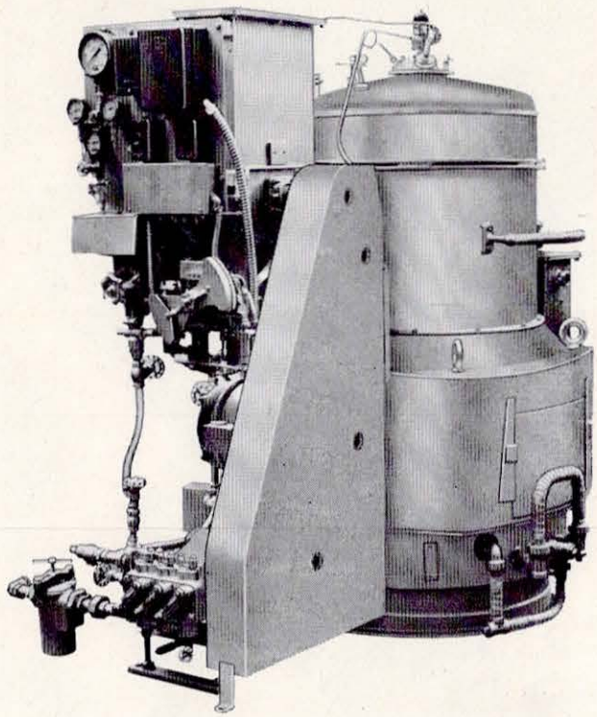


Youngstown COLD FINISHED CARBON AND ALLOY STEEL BARS

THE YOUNGSTOWN SHEET AND TUBE COMPANY *Manufacturers of Carbon, Alloy and Yoloy Steel*
General Offices: Youngstown, Ohio - Export Office: 500 Fifth Avenue, New York 36, N. Y.
PIPE AND TUBULAR PRODUCTS - CONDUIT - BARS - RODS - COLD FINISHED CARBON AND ALLOY BARS - SHEETS - PLATES - WIRE - ELECTROLYTIC TIN PLATE - COKE TIN PLATE - RAILROAD TRACK SPIKES

Push-Button Steam for Big Jobs

VAPOR Steam Generator



New Model FS-4626 Vapor "Packaged" Industrial Steam Generator, modulating-type, pressure-atomized. Vapor units are rated from 18 to 160 h.p.

A MECHANICAL SUPERINTENDENT WRITES:

Compared with conventional boilers, savings in time and labor, alone, can pay for a Vapor Steam Generator in less than a year —and it occupies about 1/5 the space.

Fully automatic; over 80% efficient; clean; quiet . . . needs no separate house; no expensive foundation or stack. Steam in 2 minutes—no early reporting . . . no stand-by attention required.

Single or multiple installations. Coordinated control. Steam *where* you need it saves piping and heat-loss. Ask for complete information.

"... if there is any question in anyone's mind concerning the adoption of steam generators instead of boilers for a large facility such as ours, there need be no doubt that it can be done with economical results.

"Our new power plant with your Vapor Steam Generators went into service about August 1 . . . we find we need to operate only two units during summer temperatures to maintain necessary steam for the car and reclamation plant."

VAPOR HEATING CORPORATION

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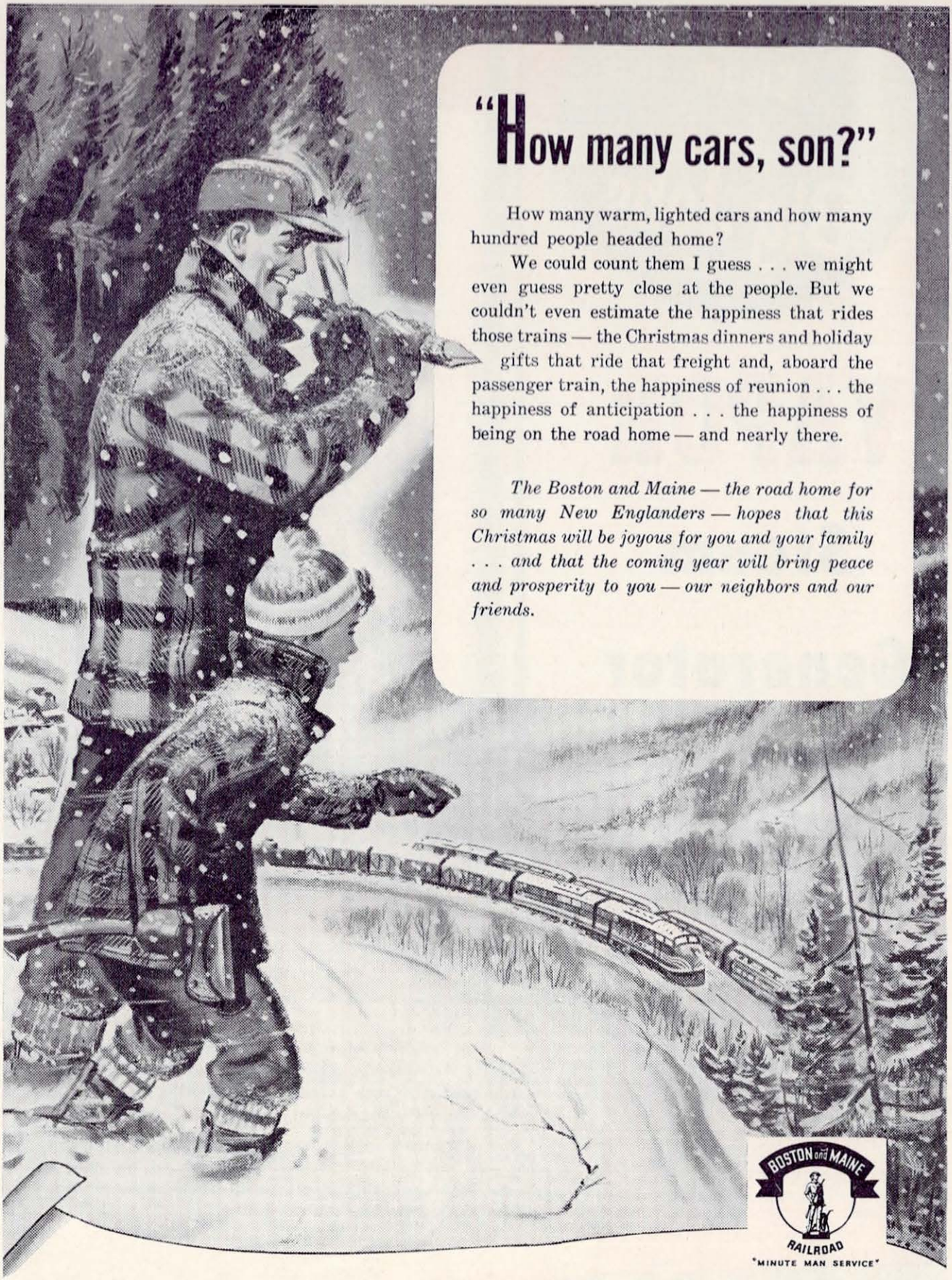
NEW YORK • ST. PAUL • DENVER • ST. LOUIS • ATLANTA • WASHINGTON • PHILADELPHIA • SAN FRANCISCO • JACKSONVILLE • RICHMOND • HOUSTON • MONTREAL • LOS ANGELES



"How many cars, son?"

How many warm, lighted cars and how many hundred people headed home?

We could count them I guess . . . we might even guess pretty close at the people. But we couldn't even estimate the happiness that rides those trains — the Christmas dinners and holiday gifts that ride that freight and, aboard the passenger train, the happiness of reunion . . . the happiness of anticipation . . . the happiness of being on the road home — and nearly there.

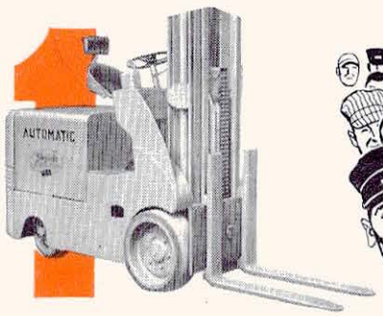
The Boston and Maine — the road home for so many New Englanders — hopes that this Christmas will be joyous for you and your family . . . and that the coming year will bring peace and prosperity to you — our neighbors and our friends.

BOSTON and MAINE RAILROAD
"MINUTE MAN SERVICE"

BOSTON AND MAINE RAILROAD

5 Big Reasons

FOR Automatic's POPULARITY WITH RAILROAD MEN

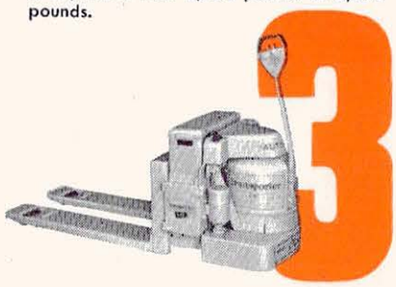


SKYLIFT—BF model is furnished in capacities from 1,500 pounds to 4,000 pounds, rated for loads up to 48″ long. With a collapsed height of 83″, telescopic lift is 132″ and single lift 68″.

Automatic offers the widest selection of electric-driven industrial trucks for Railway purposes

LOAD CARRYING PLATFORM TRUCK—FP-20. All-purpose platform trucks with large area fixed platform, for variety loading or freight transfer, can be supplied in capacities from 2,000 pounds to 6,000 pounds.

TRANSVEYOR (Platform Truck)—4,000 lbs. capacity. Short, compact, maneuverable...for operation in narrow and congested areas. Has exclusive Balanced Action! This center-pivoted feature eliminates frame distortion and equalizes load. Drive and idler wheel are connected by tie-rod and steer simultaneously.



TRANSPORTER (Pallet). Both 4,000 pound and 6,000 pound capacity models of the pallet type "101" Transporter are furnished with forks from 30″ long and up in 2″ steps, suitable for use with open face or double face pallets. Width over forks is 27″.

Mail Coupon Today

for more information on these and other "railway-keyed" Automatic trucks.

TRACTOR—On FT-E Center Control model driver sits while on FT-E end control model driver stands at rear. Either will draw trailer load of 14,000 pounds all day, or up to 38,000 pounds short distances, intermittently. Normal drawbar pull capacity of both types is 250 pounds, with an ultimate of 950 pounds.

Automatic®

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

Automatic 85 W. 87th St., Dept. W-3 Chicago 20, Illinois

Please send complete facts on Automatic electric-driven industrial trucks for Railway purposes.

*Company Name*_____

*By*_____ *Title*_____

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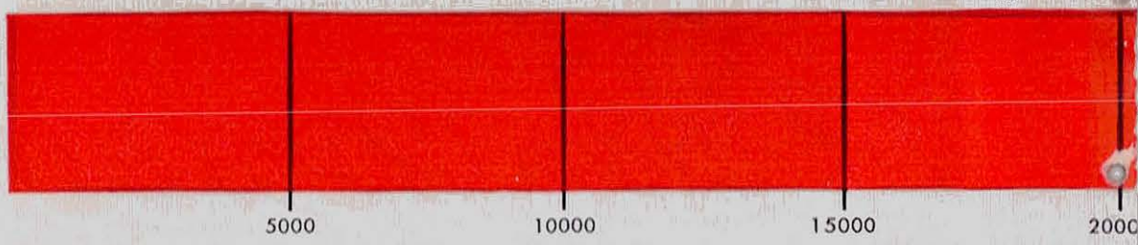
*City*_____ *Zone*____ *State*_____

LADING DAMAGE INDEX

Car Outbound
Mounted on short-travel coil springs



Same Car Inbound
Mounted on ASF Ride-Control Packages

VISUAL PROOF

Detailed results of typical test run...Compare the "before and after" riding qualities of the test car!

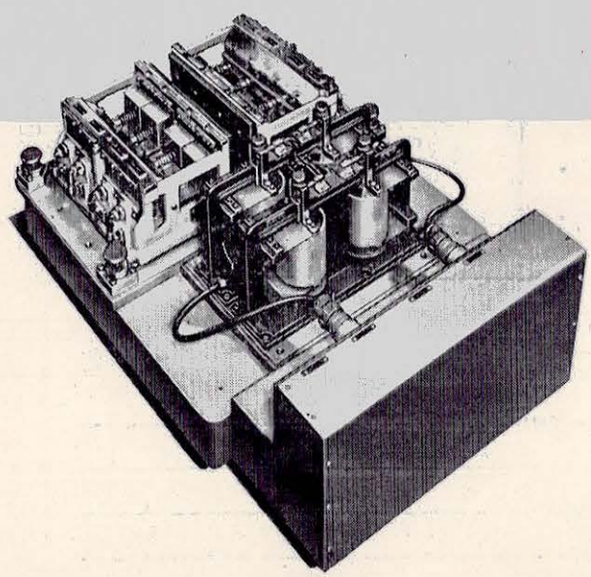
CAR OUTBOUND	Service Factors	SAME CAR INBOUND
27.9 Miles	Distance	27.9 Miles
145,000 Lbs.	Rail Load	145,000 Lbs.
AAR 1936 Coils	Type Springing*	ASF Ride-Control Packages
56 M.P.H.	Maximum Speed	84 M.P.H.

Actual Impact Count—and Lading Damage Index Factor

10,908	.25G	4894 x 1 — 4,894	2,699	.25G	2590 x 1 — 2,590
6,014	.50G	3631 x 4 —14,524	109	.50G	100 x 4 — 400
2,383	.75G	1667 x 9 —15,003	9	.75G	7 x 9 — 63
716	1.00G	716 x 16—11,456	2	1.00G	2 x 16— 32
Lading Damage Index		**45,877**	Lading Damage Index		**3,085**

(NOTE: Lading damage index reduced 93.3%. Discount the relatively harmless .25G impacts and the reduction is 98.7%, even though test car travelled 84 M. P. H. on the return trip!)

**Approximate time required for change to Ride-Control Packages: 12 minutes!*

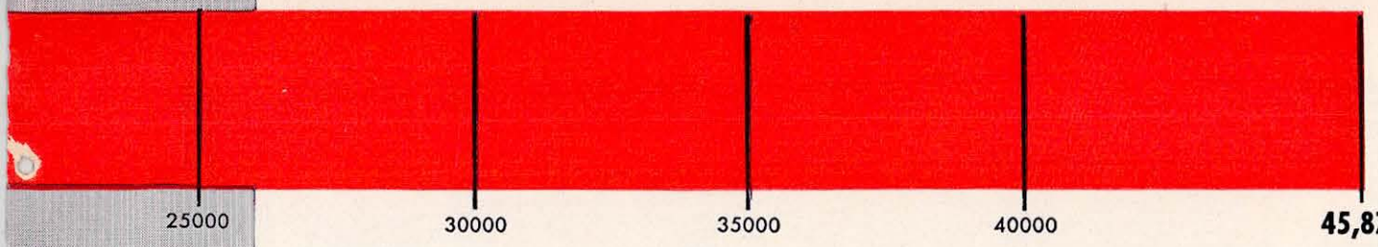


How the tests were conducted

Consist of ASF Test Train at Atlantic City was 2 identical 50-ton box cars, an "operations car" (with observation dome) and 2 passenger cars.

One box car was equipped with ASF Ride-Control Trucks. The other box car was mounted on AAR 1936 coils for the outbound run; for the return trip *on the same track*, it was remounted on ASF Ride-Control Packages.

Sensitive accelerometers (shown at left) were located at each end of each box car. They measured the lateral and vertical shocks, recorded in the operations car.



# of smoother freight hauls!

Take a freight car with short-travel coil springs ...remount it on ASF Ride-Control® Packages ...and the graph above shows how the lading damage index is reduced over 90%.

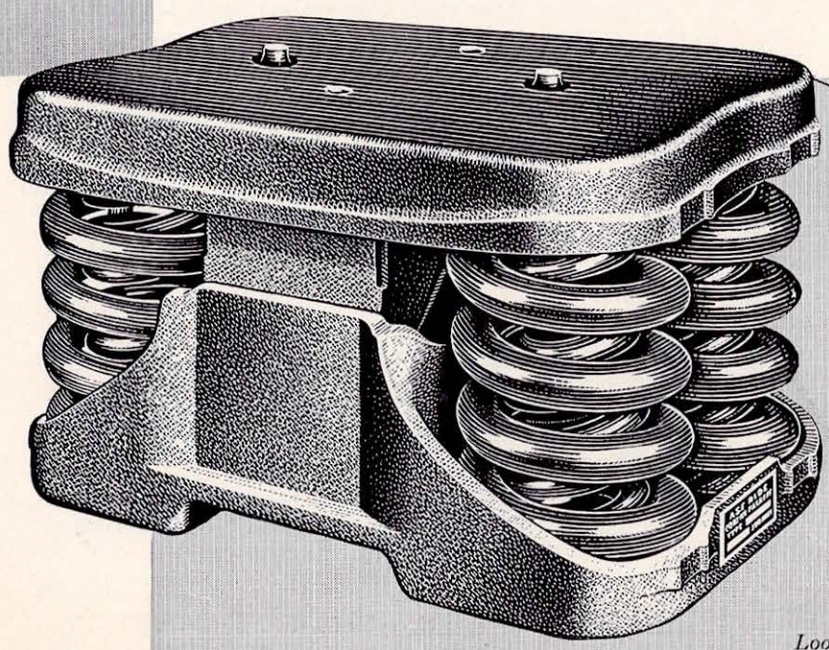
One of the fastest ways to cut lading damage claims is to bring *all* your freight cars up to modern riding standards . . . *credit old short-travel springs against an investment in ASF Ride-Control Packages.* The Atlantic City runs with the ASF Test Train prove how a quick changeover from 1936 coils to the Package practically revolutionizes the riding qualities of an otherwise identical car. Typical test results are shown at left.

And, smoother riding is only the most obvious reason why ASF Ride-Control Packages quickly pay for themselves. Ask yourself how much rough riding costs your road in terms of frequent car repairs, higher maintenance of way, cars suitable for restricted use only. Then consider the economy of a general repairs program that includes giving your older cars riding qualities closely comparable to a brand-new car!

* * *

Call your nearest ASF Representative—for the facts on how an investment in Ride-Control Packages can quickly be written off.

Bring YOUR older cars up to modern riding standards...with



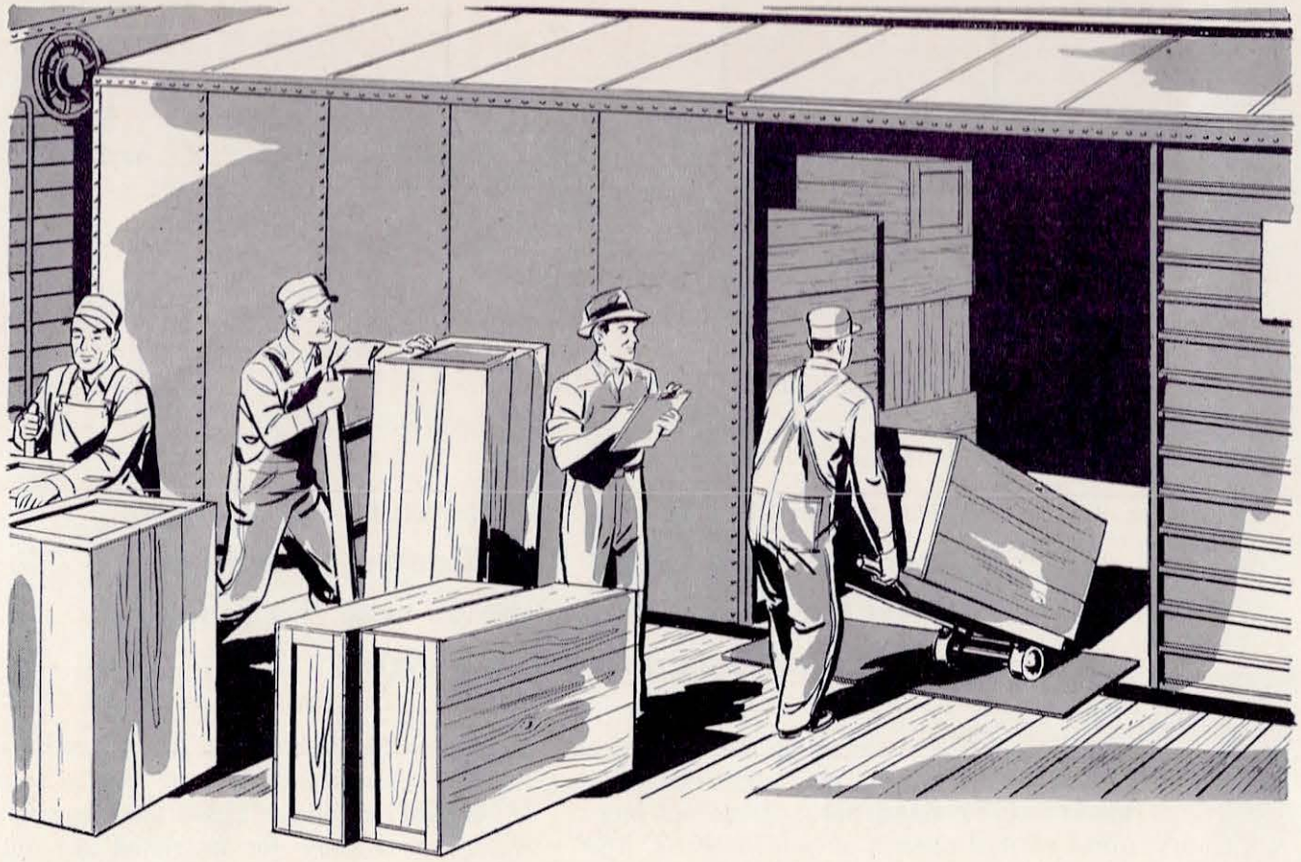
ASF

RIDE-CONTROL PACKAGES

AMERICAN STEEL FOUNDRIES
410 N. Michigan Avenue, Chicago 11, Illinois

Look for this MINT ◯ MARK on the running gear you specify

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec



...busiest boxcars in the business

How one railroad gets two extra work days per car, per month

WITH ITS OWN P-A-X BUSINESS TELEPHONE SYSTEM, one leading railroad keeps its freight cars working on an average of 25 days each month! The Superintendent of Car Service estimates that P-A-X adds two working days to each car each month by speeding and simplifying every operation from general car surveying to tracing individual cars.

A *system-wide* network of P-A-X telephones and circuits is owned by the railroad. P-A-X telephones are installed wherever needed. Virtually any employee may dial anywhere at any time to speed a job through. Here's only one way this railroad saves money with its private, long-distance telephone system. . . . From Sales to Service, P-A-X quietly gets things done in less time, with less work and correspondence, and *for less money.*

A detailed case study prepared with the help of this Class 1 railroad offers you an unbiased report of P-A-X use in railroad operation. The 12-page booklet is concise, interesting, illustrated. Write today for your copy.

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1033 West Van Buren Street, Chicago 7, Illinois
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AUTOMATIC ELECTRIC

TESTED! PERFECTED! PROVEN!

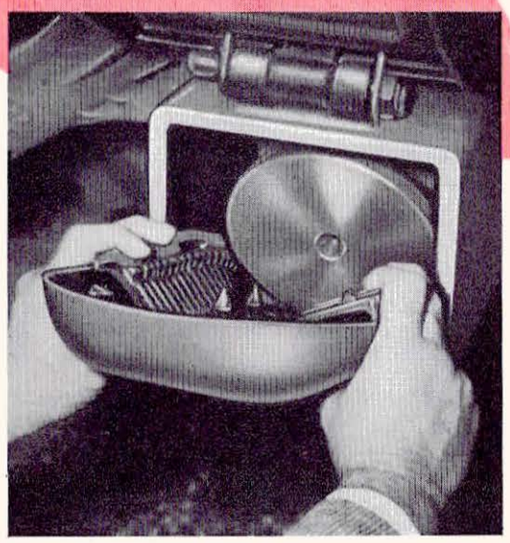
HOT-BOX

PREVENTION

A.A.R. APPROVED FOR UNLIMITED USE IN INTERCHANGE

PLYPAK

WASTE CONTAINER & RETAINER



Plypack is readily slipped into the journal box by hand and set firmly in place with the aid of a packing iron.

Easily Applied!

PLYPAK WASTE RETAINERS, made of special rubber-compound, are resilient, easy to handle, easy to apply, easy to pack to assure positive and ample lubrication. Made in sizes to fit all standard A.A.R. freight journal-boxes the PLYPAK slips smoothly into the box. In place, it fits snugly. Pocked according to A.A.R. lubrication manual packing instructions, PLYPAK holds the waste resiliently against the journal.

PLYPAK is an essential for today's high-speed freight operation. High speed develops greater dislocation of the journal and increased movement of the box requiring a resilient waste container and retainer. For positive lubrication in high-speed operation, PLYPAK is an essential for proper lubrication.

Withheld from the open market till tested, perfected and proven, PLYPAK is now available for all standard A.A.R. friction bearings in freight service.

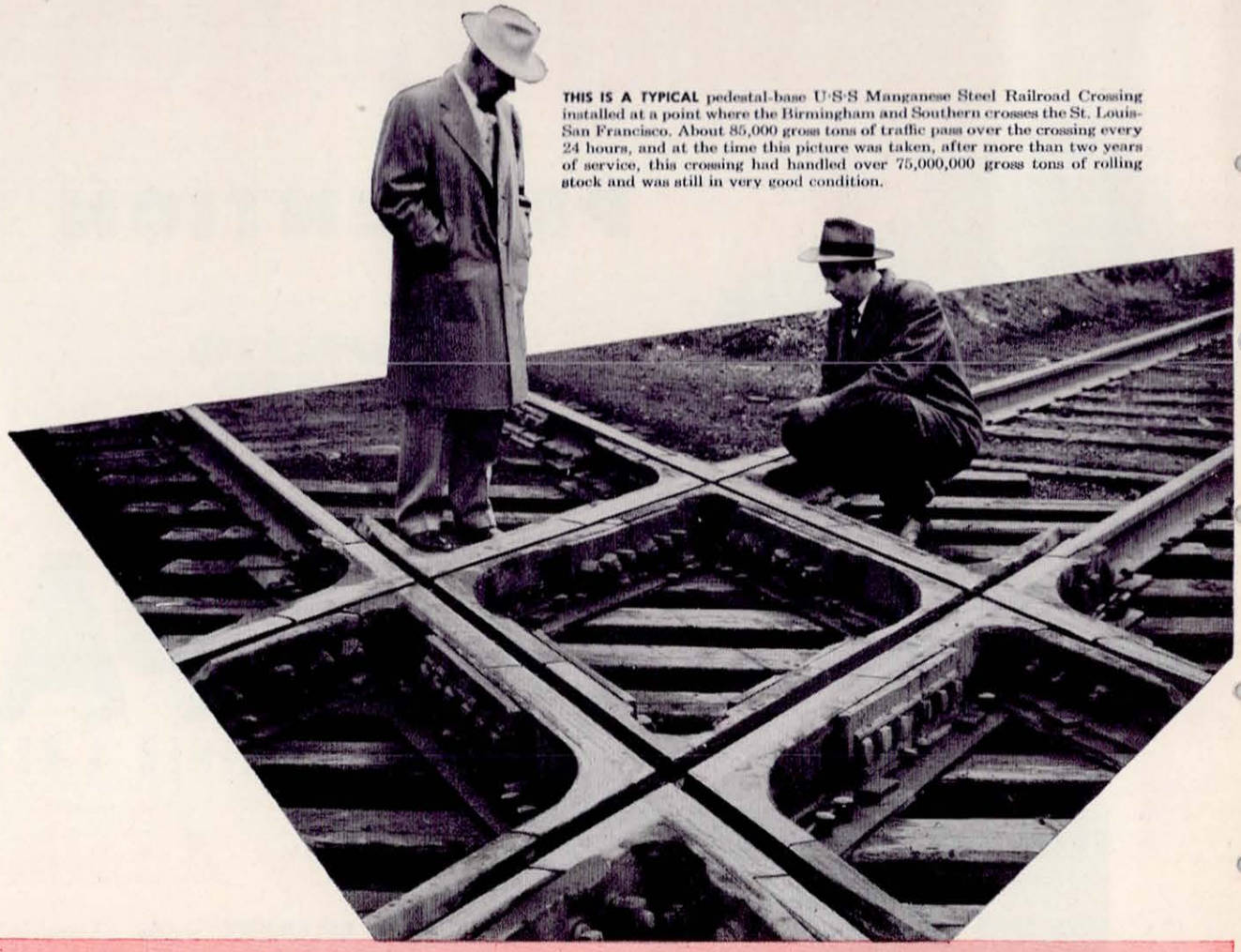
Your inquiry is invited.

WAUGH EQUIPMENT COMPANY

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

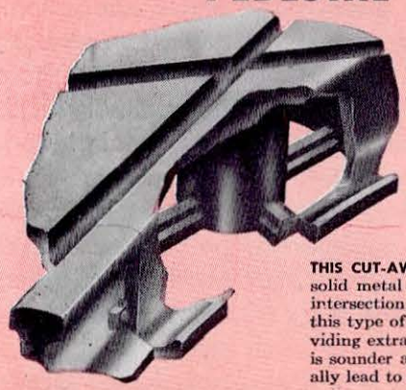
CHICAGO — ST. LOUIS — CANADIAN WAUGH EQUIPMENT COMPANY, MONTREAL

Cut your crossing maintenance costs

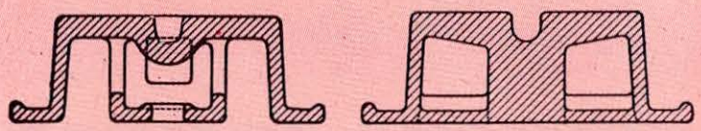


THIS IS A TYPICAL pedestal-base U·S·S Manganese Steel Railroad Crossing installed at a point where the Birmingham and Southern crosses the St. Louis-San Francisco. About 85,000 gross tons of traffic pass over the crossing every 24 hours, and at the time this picture was taken, after more than two years of service, this crossing had handled over 75,000,000 gross tons of rolling stock and was still in very good condition.

PEDESTAL BASE

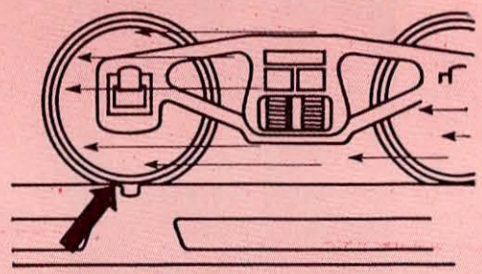


THIS CUT-AWAY VIEW shows the pedestal base of solid metal located directly under the crossing intersection. More liquid metal is used in casting this type of intersection; so, in addition to providing extra vertical support, the entire casting is sounder and freer of internal flaws that usually lead to failure.

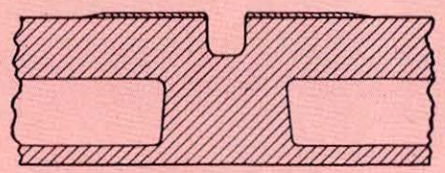


THESE TWO cross-section views of (left) an old-style intersection and (right) a pedestal-base intersection clearly show the extra vertical support provided by the sturdier pedestal-base construction. Ordinary intersections are hollow underneath the flangeway intersections at the point where they need the greatest strength.

DEPTH HARDENING



AS SHOWN ABOVE, the corners of ordinary manganese railroad crossings, which are hardened to only 200 Brinell in the shop, are pounded down about ¼" by the batter of train wheels and require extensive rebuilding.



ON DEPTH-HARDENED U·S·S Manganese Steel Crossings a 3/16" x 5" pad is cast integrally on each critical corner of intersections. This pad then is hammered to a hardness of 400 Brinell and ground to surface level before installation. This minimizes the damaging effects of wheel batter.

with stronger, more durable

U·S·S MANGANESE STEEL RAILROAD CROSSINGS

U·S·S MANGANESE STEEL RAILROAD CROSSINGS provide the extra strength and durability so necessary in crossings that must stand up under constant pounding from today's faster, heavier trains. In addition, these crossings require a minimum of maintenance, and, therefore, reduce costs and service interruptions.

Both improved design and improved metallurgical practice contribute to the outstanding performance of U·S·S Manganese Steel Railroad Crossings.

Unique Pedestal Base Assures Extra Strength and Longer Life

In these crossings, a pedestal base—a solid column of tough manganese steel—provides extra vertical support right where it's needed most: at the intersections, where wheel pounding is most severe. This pedestal base is many times stronger than the rib construction typical of ordinary crossings; and its extra support reduces deflections caused by wheel batter, a major cause of internal cracks that eventually lead to failure.

An improved method of casting adds additional strength and reliability. To minimize porosity and cavities characteristic of ordinary manganese castings, 5 to 10 times as much feed metal is used for these pedestal-type crossings as for other types, and the feed is much more closely controlled. This practice results in an improved casting.

Depth Hardening for Minimum Maintenance

U·S·S Manganese Steel Railroad Crossings are depth hardened to approximately 400 Brinell *before* leaving the shop. In other manganese crossings, track surfaces are hardened to only about 200 Brinell before installation—the pounding of train wheels is depended on for additional hardening. This wheel pounding batters down the corners of intersections, and these corners must be built up again by welding and grinding.

This needless maintenance and expense is eliminated with U·S·S Depth-Hardened Railroad Crossings. Before they leave the shop, all intersections are *hammered* to a hardness of 400 Brinell—the hardness required for modern railroad service—and ground to surface level. This assures maximum durability and resistance to wheel wear.

ADVANTAGES OF U·S·S MANGANESE STEEL RAILROAD CROSSINGS

✓ Longer life
✓ Greatly reduced maintenance
✓ Extra strength

U·S·S for All Your Trackwork

The improvements in design and metallurgical practice that are used in U·S·S Manganese Steel Railroad Crossings are typical of the extra care and effort that go into the making of all United States Steel Trackwork products; so specify U·S·S for all your trackwork requirements. We supply joint bars, tie plates, switches, frogs, and special track layouts, including crossings. In all of these the U·S·S label assures you of top quality and service.

USS TRADE MARK

UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA-STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

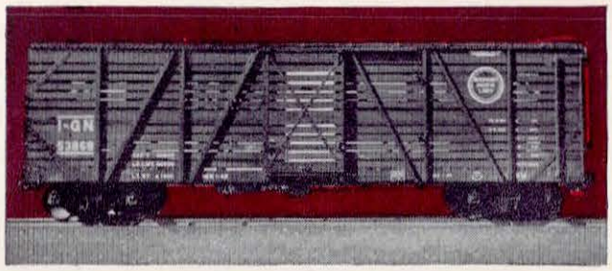
2-1493

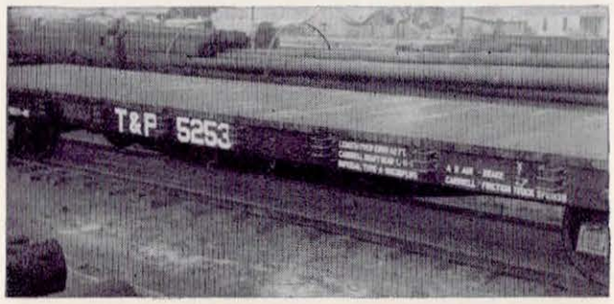
UNITED STATES STEEL

THE MISSOURI, KANSAS & TEXAS
THE ERIE
THE MISSOURI PACIFIC
THE CHESAPEAKE & OHIO
THE BALTIMORE & OHIO
THE ROCK ISLAND
THE DENVER & RIO GRANDE WESTERN
THE SOUTHERN
THE GULF COAST LINES
THE NICKEL PLATE

Ask these roads about the convenience of Koppers Service on car lumber

THE PENNSYLVANIA
THE BOSTON & MAINE
THE LOUISVILLE & NASHVILLE
THE WESTERN MARYLAND
THE ILLINOIS CENTRAL
THE PITTSBURGH & WEST VIRGINIA
THE SEABOARD AIR LINE
THE TEXAS & PACIFIC
THE GREAT NORTHERN





• Maximum saving from the use of pressure-treated car lumber depends on careful planning. Koppers service can help you to match your needs with supply, at the right time in the right place.

Typical of the facilities to service car lumber requirements are the many Koppers plants equipped for pressure treatment not only with creosote, but also with other approved preservatives which are particularly suited to car lumber applications. The availability of a complete range of preservatives insures you of just the right treatment for each of your lumber applications.

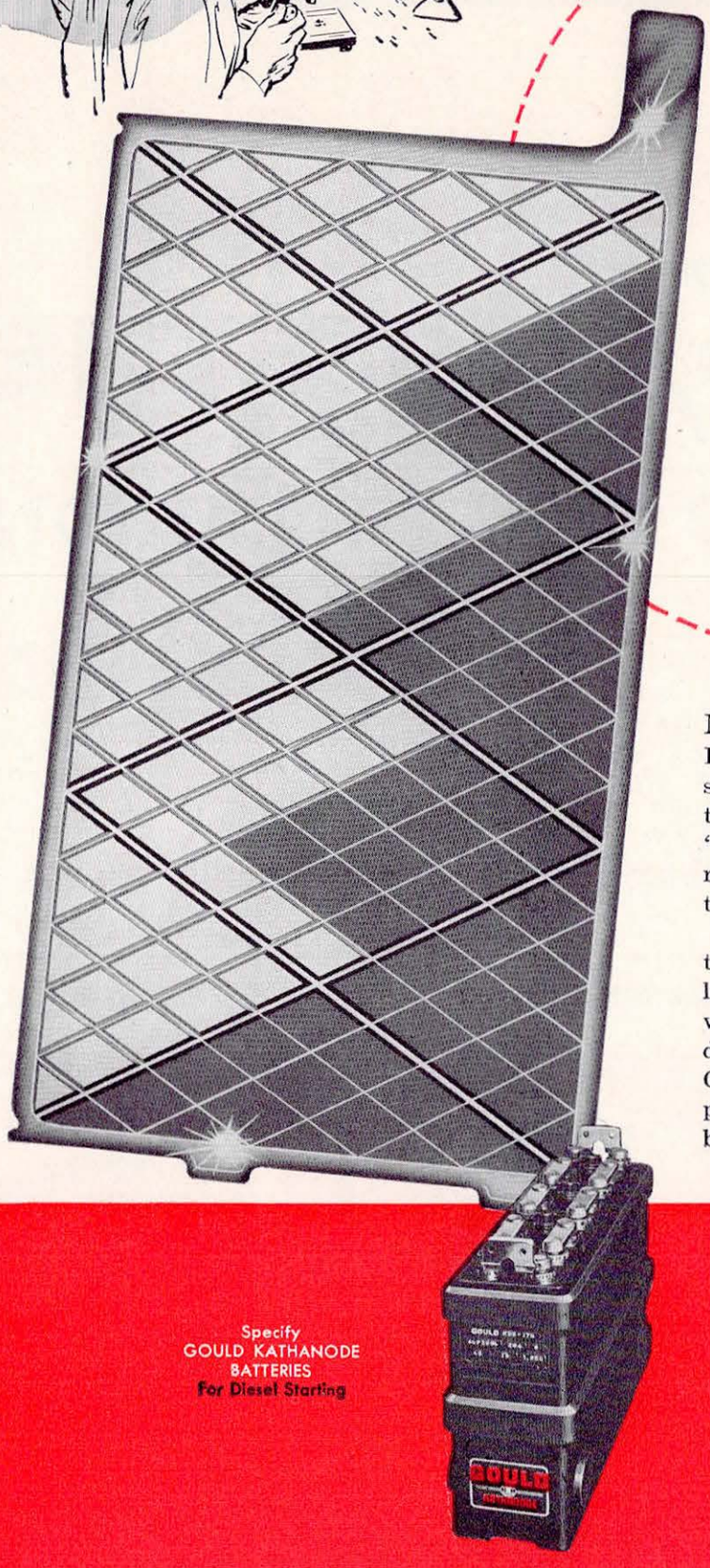
A careful study of your shop locations, lumber stocks and buying practices may indicate important additional savings in the use of car lumber. Such an analysis could be furnished without obligation by Koppers Technical Department Please address your request to Mr. Ralph Bescher, Wood Preserving Division, Koppers Company, Inc., Orrville, Ohio.

KOPPERS COMPANY, INC. • Pittsburgh 19, Pa.

KOPPERS

KOPPERS PRESSURE-TREATED WOOD

"Years Ahead Thanks to Gould Research"



New DIAMOND "Z" GRID

NEW research developments from the great Gould Laboratories now make it possible to combine the structural bracing of the original Diamond grid with the uniform density so perfectly accomplished in the "Z" grid. The result is a grid that's years ahead of requirements, built to the demands of users and tested under tough day in and day out service.

The new Diamond "Z" grid cannot "grow" under the toughest kind of treatment. Its diamond, bridge-like construction has extra strong members that withstand abuse and deliver the rugged service future demands will require. Another step forward in Gould's research program to give you *extra* battery performance, longer battery life! When you buy, buy Gould!

© Gould-National Batteries, Inc.

Specify
GOULD KATHANODE
BATTERIES
For Diesel Starting

GOULD

RAILROAD BATTERIES

GOULD-NATIONAL BATTERIES, INC.
Trenton 7, N. J.

Always Use Gould-National Automobile and Truck Batteries

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RAILROAD

. . . for Quality

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AND AIR DISTRIBUTION

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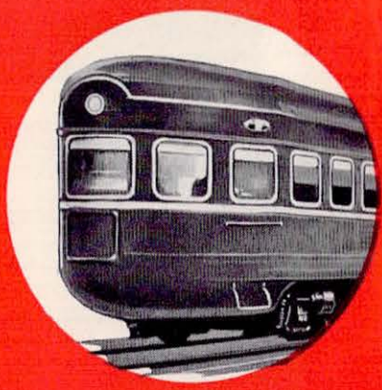
Write for bulletin describing the many Pyle-National products

for **DIESEL LOCOMOTIVES**

for **STEAM LOCOMOTIVES**

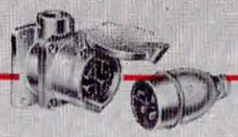
for **PASSENGER CARS**



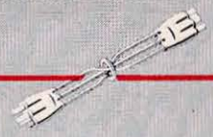
Over **55** *years of specialized experience in the design and manufacture of railway electrical equipment*

FLOODLIGHTS

PLUGS AND RECEPTACLES

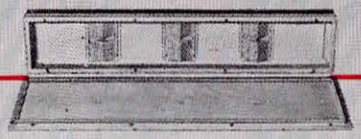


TRAINWIRE CONNECTORS



CONDUIT FITTINGS

MULTI-VENT AIR DIFFUSING PANELS



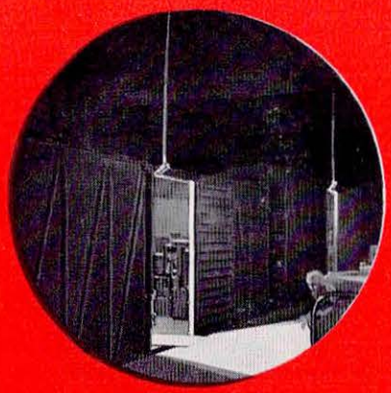
PRODUCTS

Durability and Performance

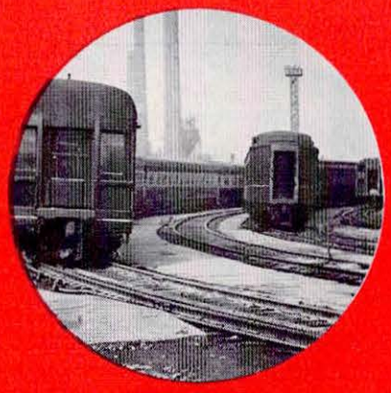
BEST IN WIRING, LIGHTING EQUIPMENT FOR ROLLING FIXED PROPERTIES

available for each of these operating catagories...

for **FREIGHT CARS & TERMINALS**



for **YARDS & TERMINALS**



for **SHOPS, ELEVATORS & OFFICES**

THE PYLE-NATIONAL COMPANY

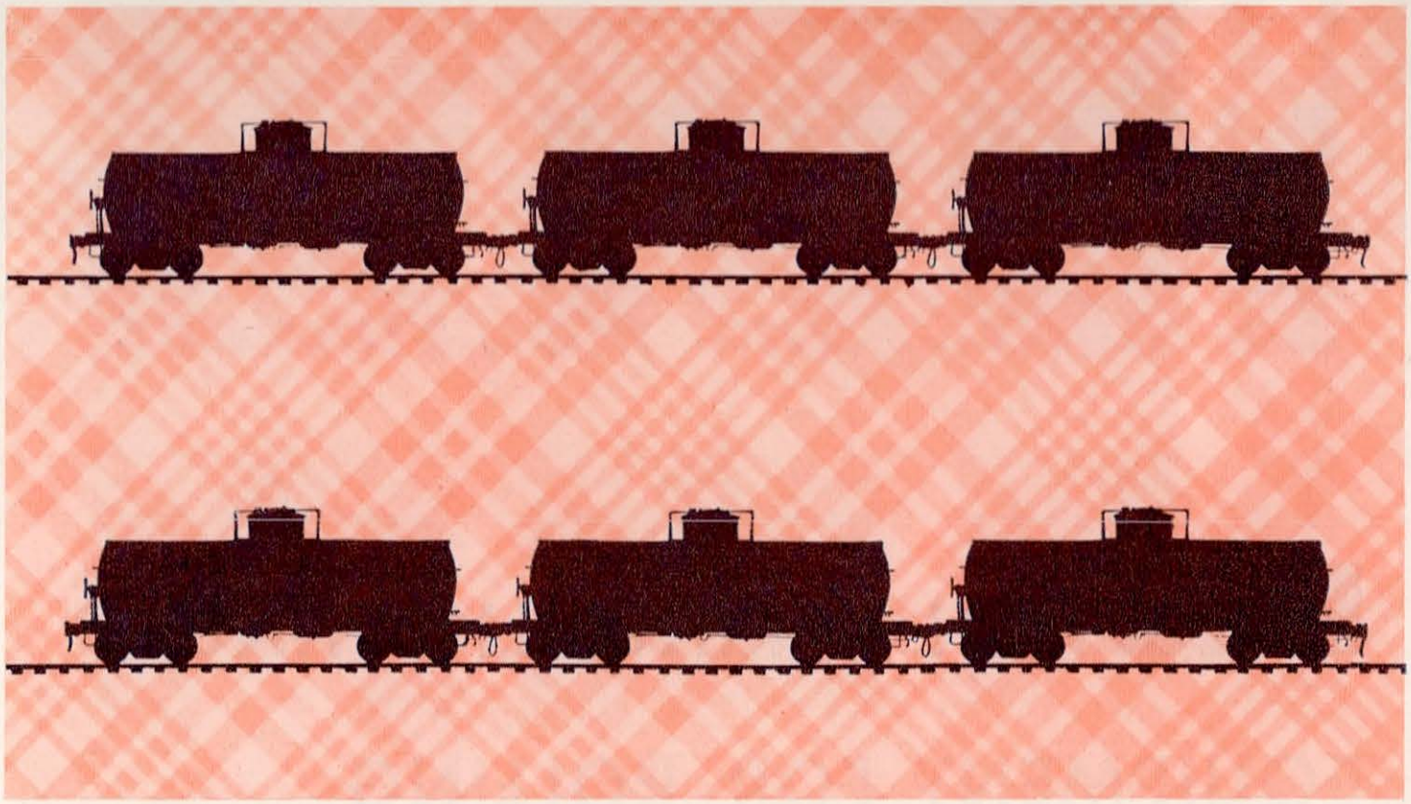
1334 North Kostner Avenue • • • Chicago 51, Illinois

BRANCH OFFICES AND AGENTS in principal cities of the United States

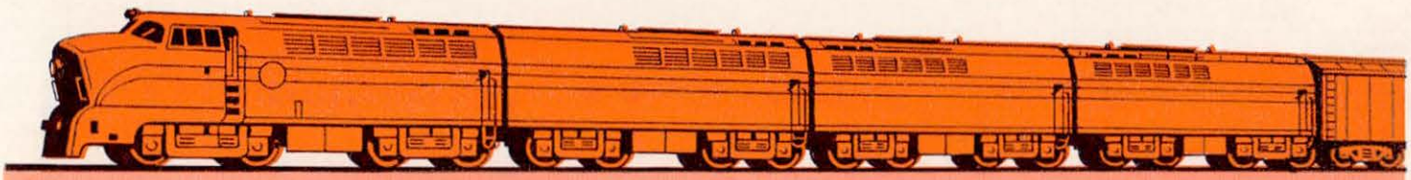
EXPORT DEPARTMENT: International Railway Supply Co., 30 Church St., New York

CANADIAN AGENT: The Holden Co., Ltd., Montreal, Toronto, Winnipeg, Vancouver

SINCE 1897

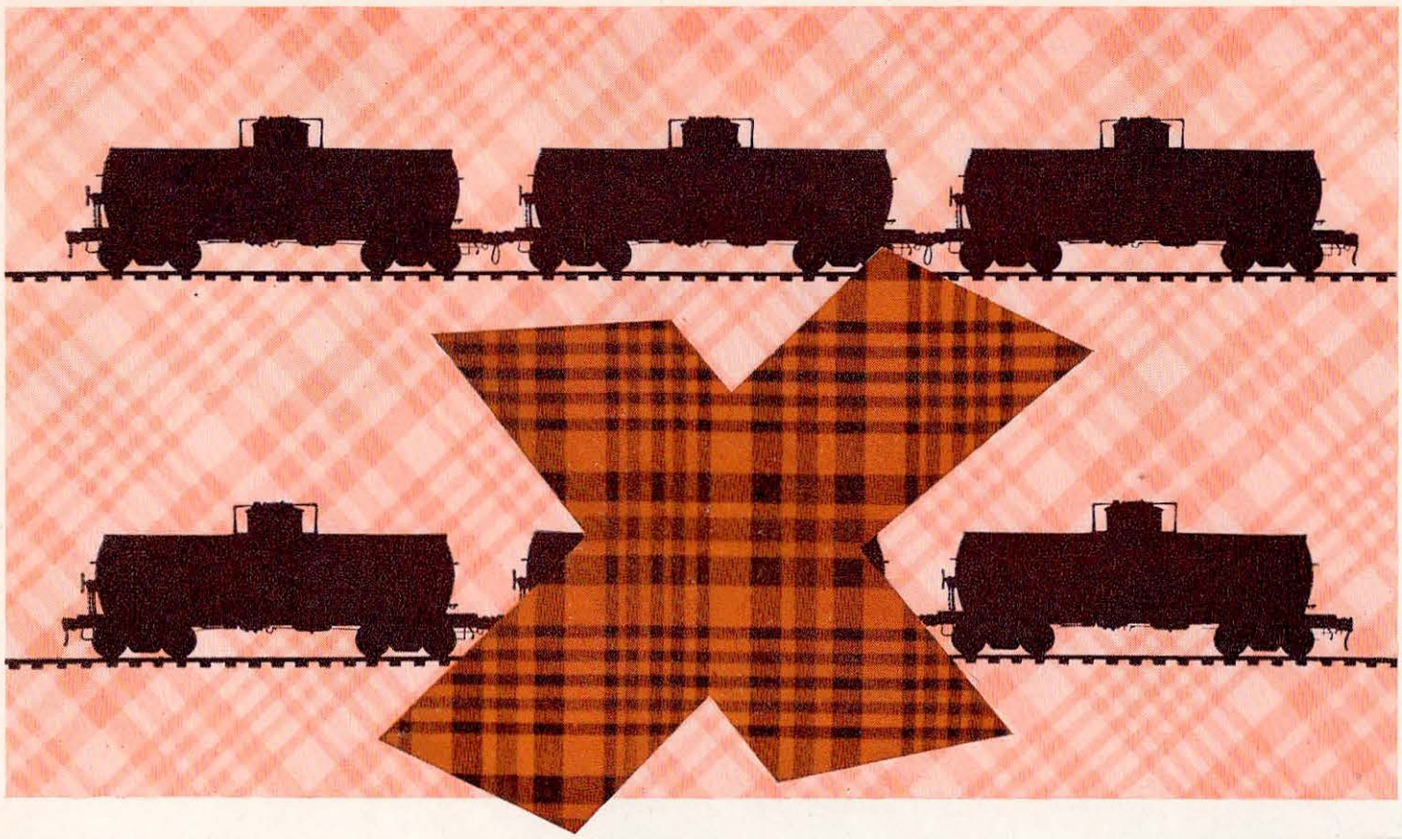


Thrifty Baldwins' fuel economy every twelve tank cars of fuel oil . .



Six Reasons Why Baldwins Are Thrifty:

1. Baldwins give as much as 8% more miles per gallon of fuel.
2. They consume up to 33⅓% less lube oil.
3. 5 to 15% fewer diesel engine and electrical parts decrease wear, replacements, and maintenance costs, and increase availability.
4. The Baldwin-Westinghouse system of dynamic braking has braking capacity which exceeds that in the majority of today's locomotives—in some cases by as much as 50%—meaning less wheel and brake shoe wear, better control.
5. They have the weight and controls that can increase hauling capacity up to 3 additional freight cars in the tough assignments.
6. Standardizing on Baldwin-Westinghouse renewal parts ensures finer quality and service for trouble-free performance and peak availability.



can mean a saving of one out of

Fuel economy is inherent in the Baldwin 4-cycle, medium speed diesel engine. Block tests and many operating records show fuel consumption lower by as much as 8%. If you would like to see the full story of the thriftiness of Baldwin-Westinghouse Diesel-Electric locomotives, please write us on your railroad's letterhead.

BALDWIN · BLH · LIMA-HAMILTON · WESTINGHOUSE

BALDWIN-Westinghouse

DIESEL-ELECTRIC LOCOMOTIVES

.... they're thrifty

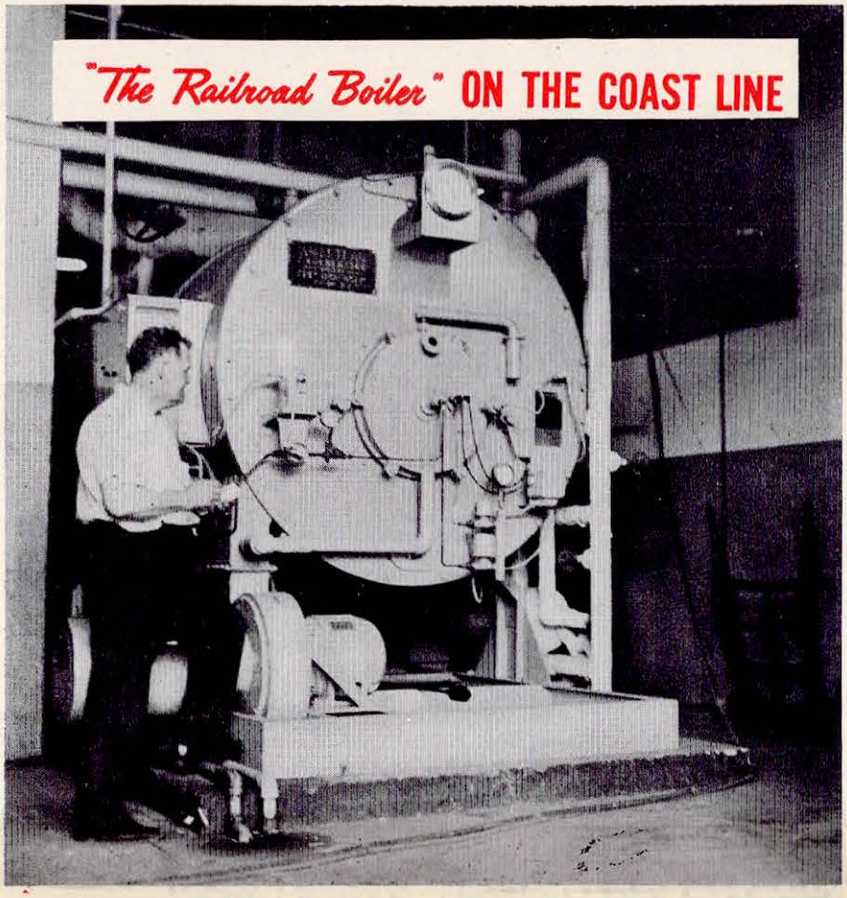


Figure YOUR SAVINGS WITH **AMESTEAM**

Wherever AMESTEAM Generators have been installed—and railroad installations have gone ahead in leaps and bounds—the savings are impressive. *Completely automatic,* these compact steam producers require no boiler room labor and provide an unfailing supply of dependable heat and process steam at better than 80% thermal efficiency.

The Atlantic Coast Line is an important AMESTEAM user with several installations at key points on the system. Shown above is a 150-hp. unit, one of four AMESTEAM Generators at the headquarters and terminal building, Wilmington, N. C.

Single units from 10 to 600 hp. Design pressure—15 to 200 lbs. Higher pressures on special order. *Phone, write or wire.*

Exclusive Distributors to the Railroads
Engineering, Sales and Service
RAILROAD SUPPLY and EQUIPMENT Inc.
148 ADAMS AVE., SCRANTON 3, PA.
Phone Scranton 2-8219

Current Publications

PERIODICAL ARTICLES

THE STRANGEST RAILROAD ON EARTH, by Nathaniel Gordon. Saturday Evening Post, November 14, 1953, pp. 28-29, et seq. Curtis Publishing Company, Independence sq., Philadelphia, Pa. Single copies, 15 cents.

The author describes the Saudi Government Railroad as a "fantastic, 366-mile, American-built line that's like none other on earth. The trains stop for prayers, and the customers try to bargain down the fares. A boxcar full of silver coins goes unguarded and untouched, but the seat covers are stolen to make shirts. It has the world's most modern equipment, but its Arab engineers come straight from the camel's saddle." Construction was begun in 1947 by the Arabian-American Oil Company at the request of King Ibn Saud, and was completed in October 1951. It boasts of VHF radio control, air conditioned cars, diesel locomotives, and a higher proportion of roller-bearing equipment than any other road on earth.

•

RENAISSANCE OF THE RAILS. Life, November 23, 1953, pp. 115-123. Life, 9 Rockefeller plaza, New York 20, N. Y. Single copies, 20 cents.

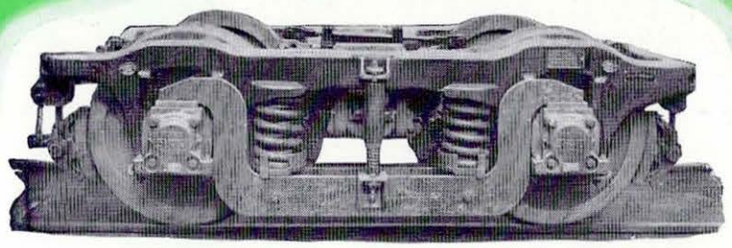
"Since a smooth ride," says Life's introduction, "is the basis of rail efficiency (less delay, wear, cargo breakage), much of [the railroads'] postwar $8 billion improvement program went for leveling roadbeds. Electronic brain and mechanical brawn more than ever replaced manpower in the form of specialized machines" like those shown and briefly described in this nine-page series of 15 photographs by Albert Fenn. Illustrated are a spreader-ditcher; tie adzer; ballast tamper; ballast cleaner; tie puller; "ribbon rail"; automatic freighthouse, car washer, car "sorters" (retarders), and food service machine; rail grinding; "piggybacks"; and a 124-ft., 32-wheel flat car.

FILM

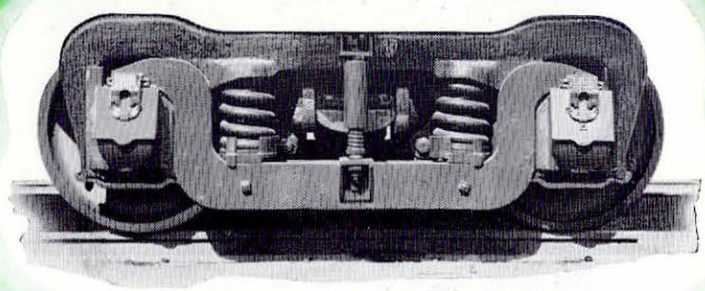
THIS IS MY RAILROAD. 30-min., 16-mm., sound, color. Produced by Gene K. Walker & Associates, San Francisco, for the Southern Pacific. Available for public showing through SP public relations offices in San Francisco and Los Angeles, district offices in Chicago and New York, or division superintendents in on-line cities.

A shortened and up-to-date version of the 60-minute show produced six years ago and viewed by nearly 10 million persons. Although it is addressed to Southern Pacific people, it is suitable for showing to employees of other roads. The film was produced under supervision of the SP's public relations department from scenes taken by the road's photographic staff. The film was completed by the Walker organization.

Invest Now to Reduce Future Maintenance Costs



Commonwealth Box-Express Car Truck
with clasp brakes



Commonwealth Box-Express Car Truck
with single shoe brakes

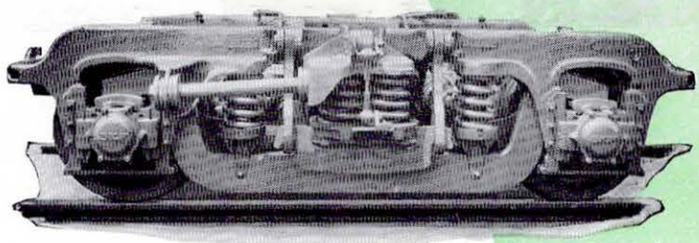
Apply these COMMONWEALTH TRUCKS

In the interest of long range economy—in lowering maintenance expense in future years—now is the time to modernize existing equipment with **COMMONWEALTH** Trucks of latest designs. Several leading railroads are utilizing the new **COMMONWEALTH** Box-Express Car Trucks and Outside Swing Hanger Type Passenger Car Trucks for better performance and operating economy.

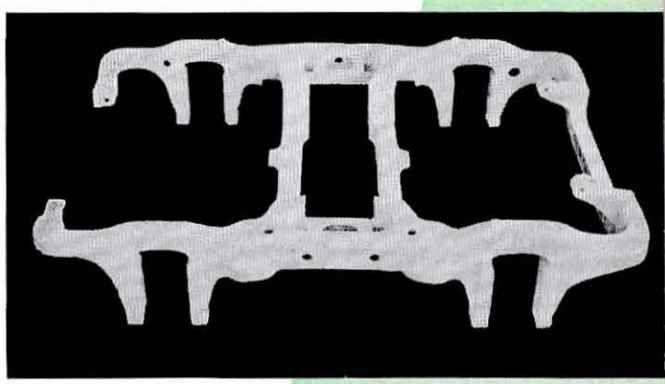
COMMONWEALTH Box-Express Car Trucks are especially designed for freight cars operating in passenger train service. Fully equalized and with swing bolsters, these trucks provide smooth, safe riding under light or loaded cars, protecting car contents and minimizing damage claims. Upkeep costs of trucks, car body and track structure are materially reduced.

COMMONWEALTH Passenger Car Trucks with outside hanger spring suspension reduce car body roll and assure smooth, comfortable riding at all speeds.

All **COMMONWEALTH** Trucks have one-piece cast steel frames and bolsters which provide great strength, long service life and a minimum of maintenance expense.



Commonwealth Outside Swing Hanger Type
Passenger Car Truck



One-piece Cast Steel Frame for
Box-Express Car Truck

To reduce future costs, apply Commonwealth Trucks now.

GENERAL STEEL CASTINGS

GRANITE CITY, ILL. • EDDYSTONE, PA.

"Sunday Drivers" By Hungerford

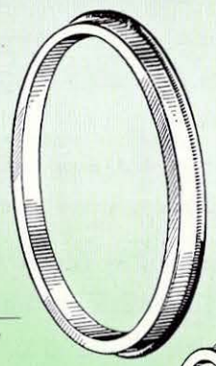
Edgewater Steel Company

PITTSBURGH, PA.

The idea for this cartoon, drawn by Mr. Hungerford, won a prize for

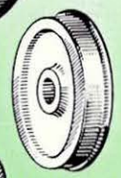
Mr. P. V. GARIN

in the Edgewater Cartoon Idea Contest, held during the R.S.M.A. Convention at Atlantic City in June 1953.



Serving America's Railroads with

ROLLED STEEL TIRES
ROLLED STEEL WHEELS
and **DRAFT GEARS**



We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

What's New in Products

Tractor-Drawn Scrapers for Any Job

LeTourneau-Westinghouse line, with four models ranging from 10½ to 28½ cu. yd., has no overhead cables

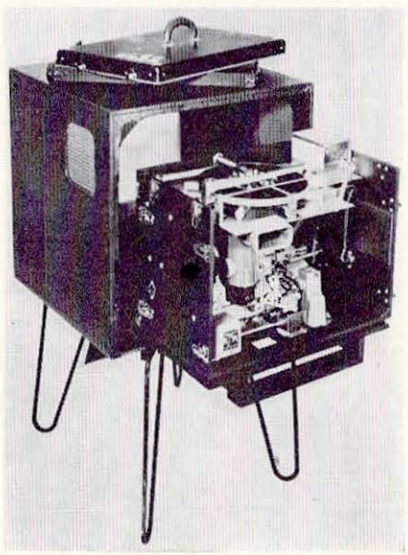
A new line of open-top, tractor-drawn, rubber-tired scrapers has been announced by LeTourneau-Westinghouse Company, Peoria, Ill. The scrapers are available in four sizes, ranging in capacity from 10.5 to 28.5 cu. yd. They are designed to fit any tractor-scraper job. The 0-14 Carryall scraper, designed for use with tractors of 70 hp. or more, has a struck capacity of 8.1 cu. yd. and a heaped capacity of 10.5 cu. yd. The 0-19 Carryall scraper, for use with tractors having 75 or more hp., has a struck capacity of 12.2 cu. yd. and a heaped capacity of 16 cu. yd. The third size of the open-top line is the 0-23, used with tractors over 80 hp. and with a struck capacity of 14.4 cu. yd. and a heaped capacity of 19 cu. yd. The Model 0-35 load rating is 22.5 cu. yd. struck and 28.5 cu. yd. heaped and is designed for use with tractors of 100 hp. or more.

The new scrapers are of welded construction throughout and, according to the manufacturer, their design facilitates shovel or conveyor loading through elimination of overhead cables. They are operated by a double drum power control unit, whose two cables work through swinging sheaves which are self-alining. Other features include: Positive ejection of material; heavy-duty roller bearings; a hard-surfaced, self-sharpening reversible blade; replaceable side runners; machine-grooved, heat-treated cable sheaves; and wheels inside the blade's edge •

"Bambino" Copying Machine

A smaller version of its "Ozamatic" copying machine was recently put on the market by the Ozalid Division of General Aniline & Film Corp., Johnson City, N.Y. The "Bambino" is a table model copier, even smaller than the Ozamatic.

The Bambino is only slightly larger than a standard typewriter and weighs 60 lb. The manufacturer says it will copy anything typed, written, printed or drawn on translucent paper with a width not exceeding 9 in. The length of documents which can be copied is virtually unlimited •



Continuous Movies Shown in Daylight

A new, portable machine for continuous showing of 16-mm. sound or silent motion pictures has been announced by the Triangle Continuous Motion Picture Projector Company, 3706 Oakton st., Skokie, Ill.

Outwardly resembling a television set, the unit—which is both projector and screen—will show up to 1,600 feet of film (44 minutes) on its 13- by 18-in. translucent screen. The unit is completely self-contained and will operate for up to 200 hours without rewinding or, by means of an automatic stop at the end of the film, it may be set to run only once and repeat by pushing a button. The shadow-box frame at the front of the unit is said to make the pictures clearly visible in an undarkened room. The unit is built around a Bell & Howell Filmosound 285 projector. The equipment includes a mechanical film inspector which automatically stops the machine if the film breaks or a loop is lost.

Continuous motion picture projectors are used for convention displays, employee training or entertainment, window sales displays, etc., where frequent performance is desired but where constant attendance by an operator is not feasible •

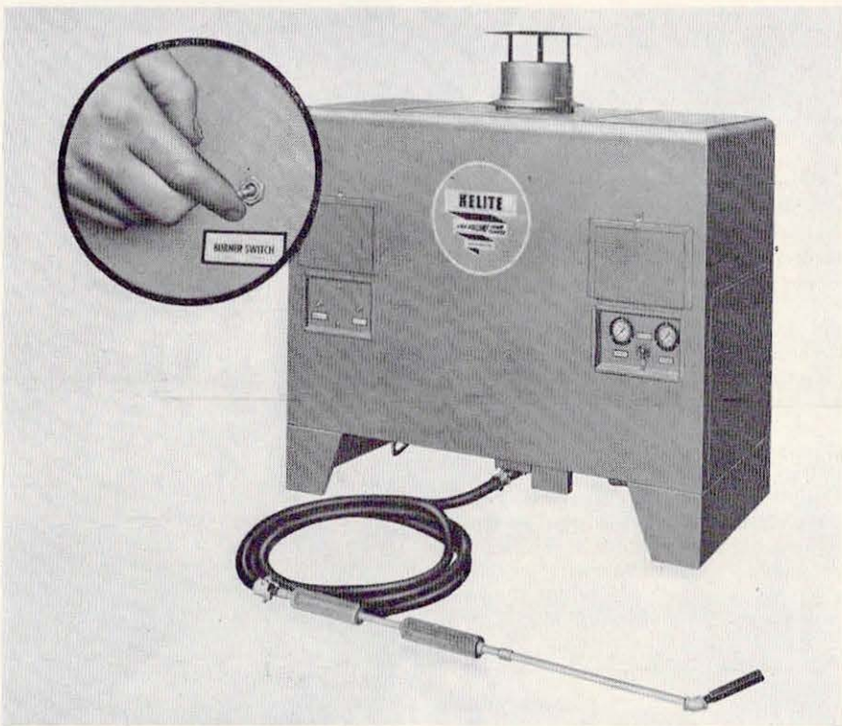
Hand Lamp for Hazardous Locations

An explosion-proof, 100-watt raintight hand lamp which weighs 4¾ lb. has been introduced by Crouse-Hinds Company, Syracuse, N.Y. The globe guard, globe holder, and cord con-

nector housing of the lightweight lamp (Type EVH 103) are aluminum. The lamp receptacle housing, which was aluminum on earlier models, has been replaced by one made of a lightweight, high-impact, molded phenolic composition. Phenolic bone fiber, another strong lightweight material, forms the lamp handle. The 100-watt rough-service lamp, is seated firmly against a metal flange by a heat- and impact-resistant globe guard. Drop tests have demonstrated that the globe cannot loosen, even under severe shock.

Both lamp chamber and handle are explosion-proof, separated by the lamp receptacle. The use of pressure type wire connectors in the cord connector assembly, instead of soldered connectors, minimizes the danger of wires being pulled free under the strain of continuous wear. Pressure type wiring also makes cord replacement easier because the cord connector entrance is more accessible.

Rubber bushings are supplied with the fixture to accommodate 3/8-in. to 5/8-in. portable cord. These bushings serve both as a mechanical cable clamp and a water-tight seal •



High Volume Steam Cleaner

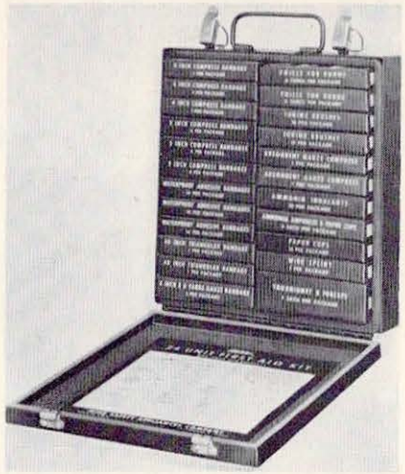
A high volume steam cleaner, featuring automatic firing, has been developed by Kelite Products, Inc., Los Angeles 12, Cal. Its burner is designed to use a wide range of fuels from gasoline to No. 2 diesel oil without changing orifices or burner parts. Turning on two electric control switches places the unit in operation. One controls a piston-type pump while the other ignites the non-clogging oil burner.

Savings in fuel are claimed from trapping radiated burner heat to raise the water temperature 50 deg. F. before it enters the heating coil. Automatic controls safeguard the machine by turning off the burner if water supply fails and prevent the burner from being fired unless the pump is in operation.

When fuel and solution tanks are filled, the device can be operated continuously for 8 hr. without refilling or refueling. It has a capacity of 150 gal. per hr. It measures approximately 55 in. by 27 in. and is 48 in. high. Weight is 825 lb. •

Hand Cleaner

A new hand cleaner for use on the job has been developed by the West Disinfecting Company, Long Island City, N.Y. The product, Antiseptic Waterless Sulpho Hand Cleaner, is formulated not only to clean hands while the worker is on the job, but also to offer added protection for people with dry or sensitive skin and who may be allergic to excessive use of ordinary soaps or to other types of waterless cleaners containing petroleum solvents. It is made of sulphonated vegetable oils which are often used in treatment of industrial dermatitis •



THE "TYPE D ALL-WEATHER FIRST AID KIT," marketed by the Mine Safety Appliance Company of Pittsburgh, exhibits new design and packaging features and a special color-identification system for packaged materials. First-aid items from inhalants to bandages are rigidly controlled to pharmaceutical standards by a quality control procedure whereby every unit carries an identifying key number, the manufacturer states. Individual unit "D" packages feature simplified, fully illustrated instructions in large, clear type. A new blue gives both the unit "D" boxes and kits a clean, distinctive appearance. The kits are available in 10-, 16-, 24- and 36-unit sizes; the 24-unit kit is illustrated •

Truck and Trailer Wheel Block

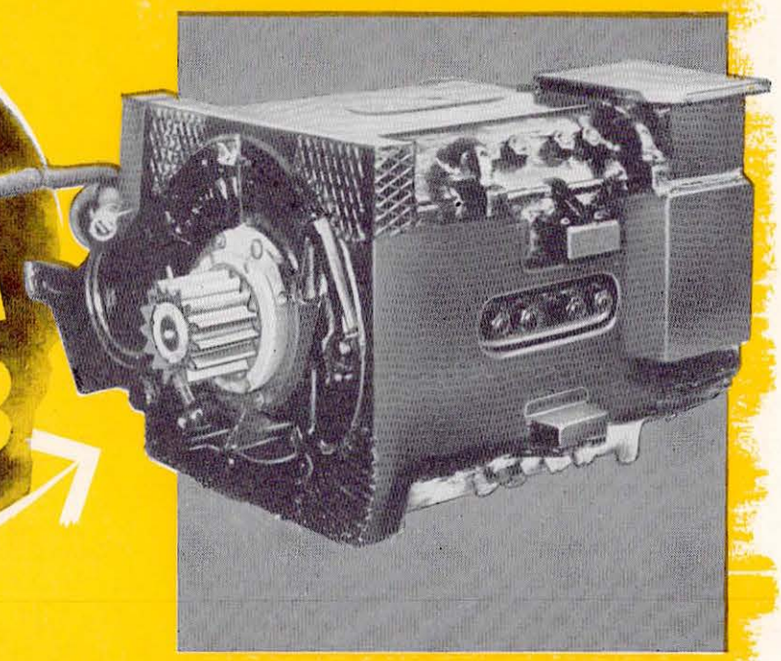
This heavy-duty cast steel alloy truck, trailer and freight car wheel block has been introduced by Calumet Steel Castings Corporation, 1636 Summer st., Hammond, Ind.

Called the Casteel Safety Wheel Block, the device is said to assure safe holding under adverse conditions of grade, surface and road bed. They are furnished with cast-in holes to permit nailing to freight car or truck floors to insure blocking of heavy equipment during transit.

The block has a wide, curved tread plate which gives greater contact to assure even distribution of load •

Your most dependable traction motor armature-bearing lubricant

SHELL CYPRINA GREASE 3



. . . for trouble-free service from shopping to shopping

THE armature bearings in all types of diesel-electric units run for much longer periods before shopping . . . when the lubricant is Shell Cyprina Grease 3. That holds for the pinion end bearings too, where conditions are really severe.

Shell Cyprina Grease 3 has outstanding stability . . . gives hard-working machine parts superior anti-wear lubrication. It remains stable under extreme changes in operating temperatures. Performance records on many railroads prove the superior service life of this special lubricant, Shell Cyprina Grease 3.

For technical information, see your Shell Railroad Service Engineer or write to:

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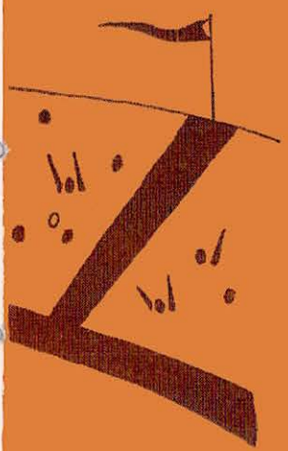
SHELL

stop....



Hit 'em hard for a sure stop—that's what makes a good lineman. And it's the incomparable stopping ability of Diamond "S" brake shoes that makes them the leader in their field.

Proved by use in all weather and operating conditions Diamond "S" shoes are the overwhelming preference of the railroads. Our progressive research and manufacturing methods will continue to provide the best in railroad brake shoes.

AMERICAN
Brake Shoe
COMPANY

BRAKE SHOE AND CASTINGS DIVISION

1974

In Venezuela, too: "POWER TO SPARE"

Among railroad men throughout the world, there is complete agreement on the advantages of Caterpillar-powered locomotives. Hear, for instance, the report of Felipe Santiajo of the Gran Ferrocarril De Venezuela on two power-packed D397 Diesels.

"We like the way they handle with *power to spare.* They operate much cheaper than steam. The performance of our D13000 and D4600 was a big factor in the purchase of D397s."

Reports on Caterpillar Railroad Diesels throughout the world are amazingly similar . . . only the language varies. Railroad men like their performance . . . want more. In Venezuela, the government-owned railroads have eight locomotives with D397s; eight with D13000s, and 24 with D4600s. There is no better proof of performance than the continuing purchase of these powerful engines.

In the picture, a G.E. 68-ton locomotive is driven by the two 500-HP D397s. These Caterpillar power plants are big brothers of the famous D17000 Railroad Diesels which power more than 90% of the 44-tonners in use on American Class I, II and III railroads.

This overwhelming preference for Cat* Engines comes from a number of cost-cutting facts:

1. Availability is high. Some roads report availability over 99%.
2. Operation is simple and economical. All Cat Diesels burn inexpensive No. 2 furnace oil.
3. Parts service is close and fast. There's no need to tie up railroad funds in parts inventory.

When you order new railroad equipment from leading manufacturers, consider your *last* cost *first* and specify Caterpillar Engines. And when it's time to repower, see your Caterpillar Dealer for the right engine for your requirements.

Caterpillar, Peoria, Illinois.

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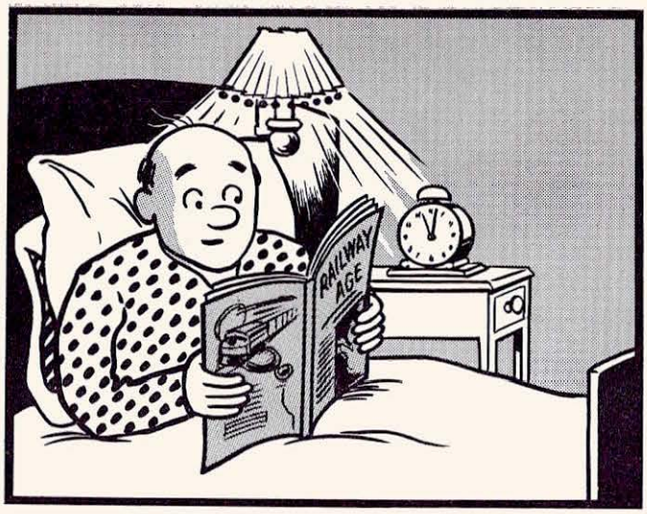

There once was a foreman named Paige,
Whose mind was still "narrow-gauge"
The boss made him squirm
When he said "you must learn"
Now he's started to read Railway Age

Progress is a funny thing. Everybody wants it, but you've got to work for it.

Take foreman Paige, for example. He wants to get ahead and he wants the recognition and financial reward that goes with advancement. But the boss had to prod him into doing something about it. Now he's making progress—*Railway Age* is part of his steady diet.

To keep up with the important developments of railroading—have your own copy of *Age* handy at home and when you have a few moments read it.

Railway Age is not only up-to-the-minute with railway news but it always carries authoritative information necessary for your progress as a railroader. Combine these facts with its readability and interesting format and you've got the tops in railroad reading.

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Above rates apply TO RAILROAD MEN ONLY (in the U. S., Canada and Mexico)

To Mr. W. M. Mitchell, poet laureate of the Bessemer & Lake Erie goes this week's $5. Who's next?

Benchmarks and Yardsticks

A VETERAN RAILWAY OPERATING OFFICER recently shared with your reporter some of his experience, and opinions, on the question of discipline. He emphasized the importance of securing the acceptance by the employees concerned of the disciplinary action as being just and necessary—rather than as something in the nature of arbitrary vengeance.

There may be some disagreement among moralists and theologians on the function of punishment—but, in railroading, discipline has one purpose only, viz., that of promoting safe, economical and commercially attractive service to the public. Any disciplinary action which does not promote this objective is wide of the mark and, hence, is unjust.

Nobody who drives an automobile can question the necessity, in the interest of his own safety, of having reasonable traffic laws and regulations which are strictly enforced. So long as such regulations are reasonable and are enforced uniformly, the individual motorist who is penalized for a violation—if he is reasonable—must admit that the penalty inflicted upon him is a favor to him, rather than an injustice. When the motorist has a reasonable complaint against a "ticket," his objection must come either (1) from the fact that the rule he violated was unsound or (2) from the not infrequent failure of uniform enforcement of the traffic law against all offenders.

Our operating officer informant advised your reporter that he had always approached disciplinary cases from the standpoint of, first, getting the subject for discipline to understand his own interest in the maintenance of an impartial disciplinary system; and, thereafter, to get him to consider what appropriate action would call for in his own case. Our informant tells us that, with the situation understood in this light, his experience has been that many employees will suggest more severe disciplinary treatment in their own cases than that which he himself has considered to be justified.

The important points seem to be: (1) that a disciplinary system ought to be as rigorous as necessary to secure safe and satisfactory performance, but not a bit more rigorous than that; (2) that the system should be applied with complete impartiality; and (3) that the employees involved should be given every opportunity to understand and share in the process, since it is their welfare—quite as much as that of other parties—which the system is striving to protect. If these considerations were better understood by employees than they are, it seems doubtful whether their unions would find it as popular, as they often do, to defend violations of regulations which have the safety of employees as their primary objective. J.G.L.

High tonnage up a reverse curve lead and smoothly over the hump—Train Master performance on the B&O's west hump in Willard.

THE FAIRBANKS–MORSE

TRAIN MASTER

...the most useful locomotive ever built

proved

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a name worth remembering when you want the best

DIESEL LOCOMOTIVES AND ENGINES • RAIL CARS AND RAILROAD EQUIPMENT • ELECTRICAL MACHINERY • PUMPS • SCALES • WATER SERVICE EQUIPMENT • HAMMER MILLS • MAGNETOS

Should Railroads or I.C.C. Direct Rate Policy?

The Interstate Commerce Commission—as noted in this space three weeks ago—has, so far, set itself in opposition to efforts by the Eastern railroads to exercise their "inherent advantages" in retaining their traffic in canned goods. An "across-the-board" reduction in railroad rates on this traffic in 1950 did not curtail the diversion of this business to trucks—a trend which resulted in a loss by the Eastern railroads of 4,000,000 tons of this attractive traffic in 1951 as compared to 1946, which was a period of rising production of canned food products.

A Case in Point

These railroads in 1952 proposed new rates on this traffic, with one series of rates based on a 36,000-lb. carload and another, much more attractive, on a 60,000-lb. minimum. The commission permitted the rates on the smaller minimum to take effect, but suspended those for the higher minimum. There was a protracted hearing before an I.C.C. examiner and on March 30, this year, Division 2 ruled that the 60,000-lb. rates had not been shown to be "just and reasonable," and ordered them cancelled. On June 8, the railroads petitioned for a hearing before the entire commission—but were turned down on August 6. On October 27, the railroads filed a second petition, requesting the commission to exercise its "discretion" to reconsider the decision on the grounds "that more than a year's experience has conclusively demonstrated that the division misjudged the effect of the existing rates and rate relationships," upon which it based its decision.

In denying the railroads' proposal for lower rates based on the 60,000-lb.-minimum carload, Division 2 quite evidently believed that the truckers intended to raise their rates on this traffic, so that the railroads' 36,000-lb. scale should enable them "to compete on a more equitable basis" for this business. Division 2 appeared also to believe that the proposed railroad scale for the 60,000-lb. minimum would not attract enough additional traffic and enough heavier loadings to offset the revenue loss the railroads would sustain from lower rates. Actually, however, the evidence now available points to the conclusion that Division 2 guessed wrong (that is, if it is fair to assume that its thinking proceeded according to the pattern outlined in the foregoing). The truckers have not made any significant increases in their rates—and the railroads are a lot worse off than they were because diversion of canned goods traffic to the trucks has been augmented.

Whose Business Is It?

Whose business is it, anyhow, to take the responsibility for railroad pricing policy? Whose responsibility is it to determine what approach to pricing will yield the larger return to the railroads? It is the undeniable duty of the commission to police railroad pricing to the degree necessary to assure conformance to the law but, beyond that point—and so long as the railroads are not earning profits far greater than required to assure an ample inflow of new capital—what justification can there be for *any* regulatory interference with rates with which the railroads wish to experiment?

The rates the Eastern railroads proposed on canned goods were those which experienced traffic officers—in their fallible judgment—believed would best serve the railroads' interests (while conforming to the law and the desires of their customers). These rates were turned down by a division of the commission—in their also not infallible judgment—not apparently because of illegality but because the commissioners had greater confidence in their own judgment as to what is good for the railroads than they did in the judgment of railroad management.

If the railroads are not going to be allowed to make full use of their "inherent advantages" in attracting and retaining competitive traffic, then it is difficult to see what future there can be for the railroad industry. As one railroad traffic vice-president has observed, in substance:

"Reductio ad Absurdum"

"If we are not going to be allowed to make selective rate adjustments, within the area of our 'inherent advantages,' to hold onto and recapture competitive traffic, then our only recourse must be to a series of percentage increases 'across the board.' Each such increase deprives us of a lot of traffic which we could easily retain at rates which would still provide us with a substantial margin of profit. As our traffic volume is thus artificially reduced, the burden of expense which must be borne by each ton of traffic retained is proportionately increased. This is a 'vicious spiral' which could go on until the railroads' entire ex-

pense of doing business would be charged up against a single remaining carload of freight."

This traffic officer, in assuming that railroads might "price themselves" down to a single carload, has employed the reasoning device known as the *reductio ad absurdum*—but only those processes which are inherently faulty and absurd to begin with can be given such treatment. This paper assumes that the members of the commission are pursuing their functions conscientiously, as it is given them to see the light. However, if they should fail to see or appreciate all the economic and legal considerations which have a bearing on this important problem, railroad managements certainly have the duty to railway owners, as well as to the public interest, to draw attention to these economic and legal questions which they fear are being neglected.

As suggested in this space on November 9, if full presentation of all pertinent facts does not bring regulatory decisions into conformance with economic reality, then the issue can be taken to other forums—including the courts, the legislative halls and the general public. The railroad industry cannot expect, however, that either the regulators, the courts, the lawmakers or the general public are going to get a firmer grasp of the economics and the law of competitive transportation pricing than railroad men themselves possess.

Such evidence as this paper has been able to come by does not suggest that railway management itself, on the average, as yet fully appreciates the transcendent importance of the competitive-rates issue which confronts the railroads. There is, on the other hand, tremendous interest in the "piggyback" or "rail-trailer" proposal—but that project comprises only one small segment of the vastly greater issue of what the overall policy toward freight rates ought to be. The interest in rail-trailers is wholly commendable, but that project is only one sheep in a large flock.

Do Not Hump

It becomes evident on inquiry that most railroaders believe that the "Do Not Hump" placard has outlived whatever usefulness it once may have had. If this observation be accurate, then should not the railroads use every means at their disposal to put an end to the use of this card? If they and their customers should decide that a substitute placard is needed, then the best thinking of both groups could be brought to bear on the question of what sort of a placard should be substituted.

An article in the November 24 *Railway Age* offered a number of suggestions for substitutes for the "Do Not Hump" admonition. Whatever may be the type of substitute placard (if any) decided on, it will get no better results than the one presently used unless shippers apply it only to those ladings which are really fragile. An educational program fostered by the loss and damage prevention committees of the 13 regional shippers advisory boards, no doubt, could help bring about this more discriminating use of car placards. The shippers have helped the railroads before, when the carriers demonstrated that such cooperation would be mutually beneficial. There's no doubt that the experience would be repeated.

How Readers Can Improve Their Reading Matter

Reader—whenever you feel the impulse to express yourself (pro or con) about anything you see in these pages—please yield to that impulse and write us. The magazine business is like any other business—we're in business to give the customers what they want and what interests them; and our best guide to their wants is to have them tell us. Fault-finding letters are particularly helpful.

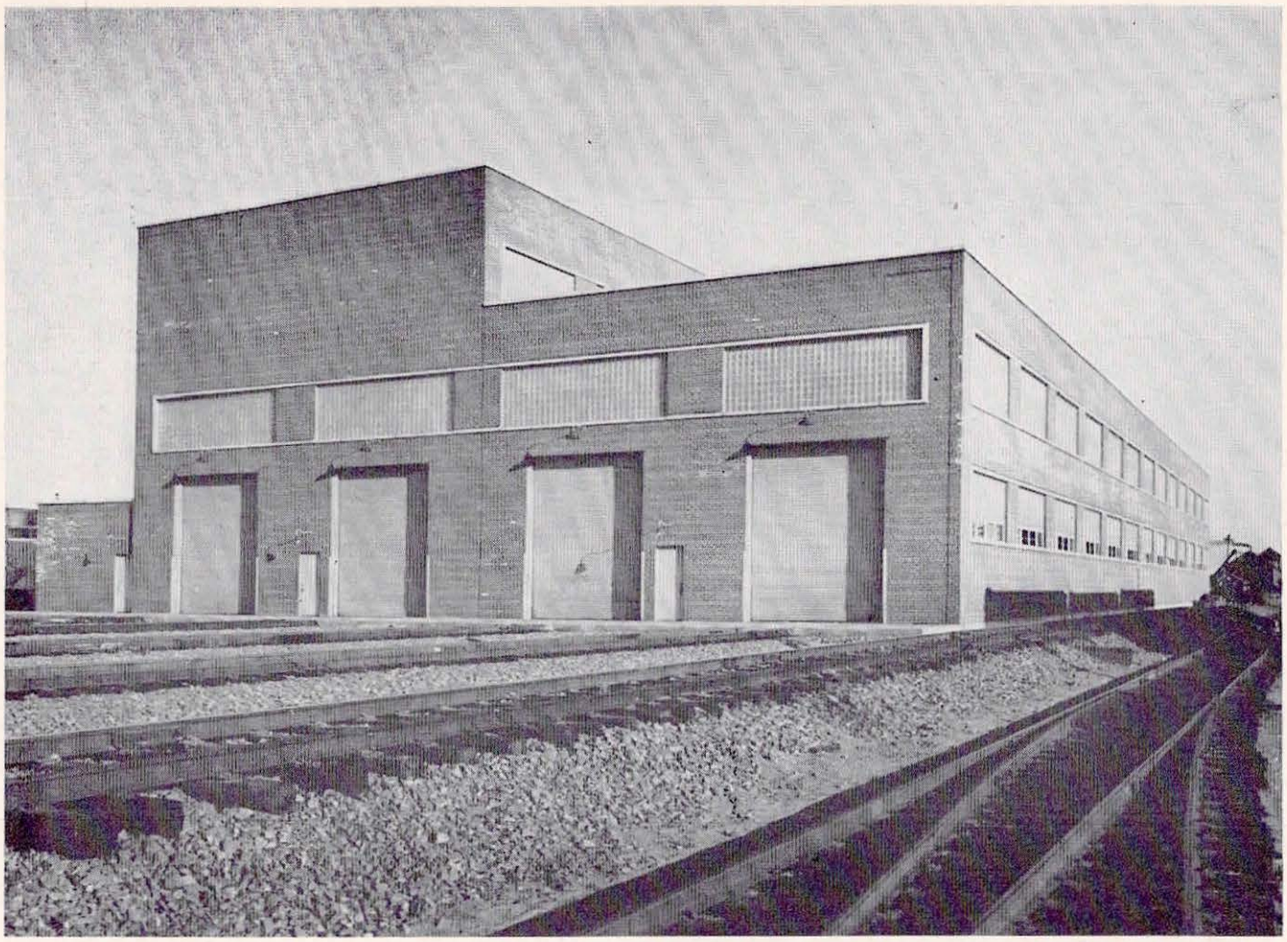
The other day Sidney J. Harris, columnist for the Chicago Daily News, had something to say on this subject.

"To so many people," he wrote, "a newspaper runs only one way: writer to reader. Actually a newspaper is tremendously sensitive to the needs and reactions of its readers. Editors hunt down errors of fact as ruthlessly as a housewife goes after ants in the pantry. No adjective is more damaging to a reporter than to be called 'inaccurate.'

"The public, by and large, is not aware of its power or its responsibilities. It either meekly accepts or hotly resents what a paper prints—but never thinks that editors and publishers are eager to get responses of readers, to correct misstatements, and to improve the quality of their product.

"A few dozen cool, intelligent letters on a controversial subject would seem like a tidal wave to an editor. A newspaper goes out into a great void every day and unless some kind of echo comes back, an editor cannot be sure he is doing his job."

Of course, we're glad to publish your letters, if you give us your permission to do so. But, whether for publication or not (and your confidences will be scrupulously respected), let us have the letters. Your reward will be—a publication ever more closely responsive to your interests and your needs.



FUNCTIONAL LINES and ample fenestration, including extensive use of glass blocks, are features of the shop exterior.

ONTARIO NORTHLAND BUILDS . . .

Diesel Shop of Latest Design

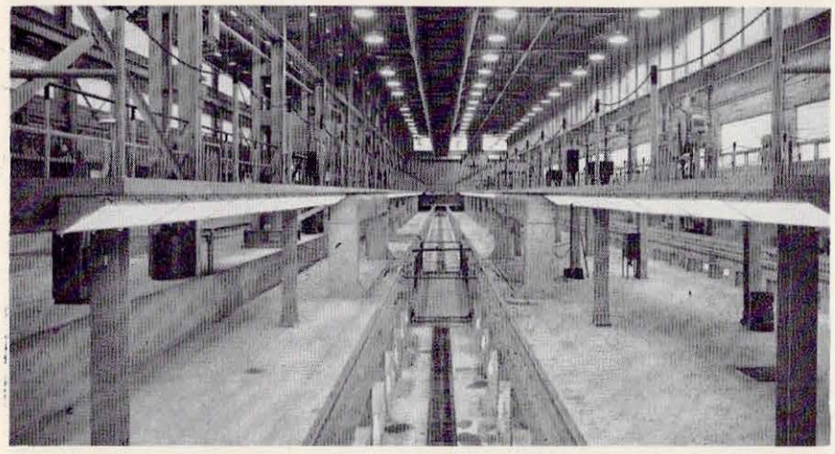
Advanced features of new facility in Canada include automatic ventilating system involving continuous hoods over pit tracks

The latest concepts of diesel-shop design and construction are not confined to structures built in this country and by the larger roads. A new shop built by the Ontario Northland at North Bay, Ont., at a cost of $1,250,000, has many features which are of interest to designers south of the border.

The main shop is 104 ft. by 260 ft. in plan, and is divided longitudinally into two approximately equal sections for servicing and repairs, respectively, each having two tracks. The service area has two through tracks, each with capacity for four diesel units, with elevated platforms on each side at the locomotive floor level and a depressed floor beneath for servicing trucks. Outlets for hot and cold water, compressed air, lubricating oil and electricity are provided along the servicing platforms. Two electrically operated crossover bridges are provided at the entering, or east, end of each service track, which permit easy passage from one elevated platform to another. These may be lowered to the rail level to permit locomotives to enter or leave the building. The repair area has two stub tracks, one for truck repairs and one for locomotive overhaul.

Particular attention has been given in the service shop to the provision of an automatic exhaust ventilating system. A continuous duct is suspended over each service track for the full length of the building. Each duct is connected to motor-driven exhaust fans in the roof. The exhausts of both main engines and the steam generators discharge into these ducts. The fans are automatically started and stopped as the temperature rises and falls. This assures a minimum heat loss from the building during winter months as the high output

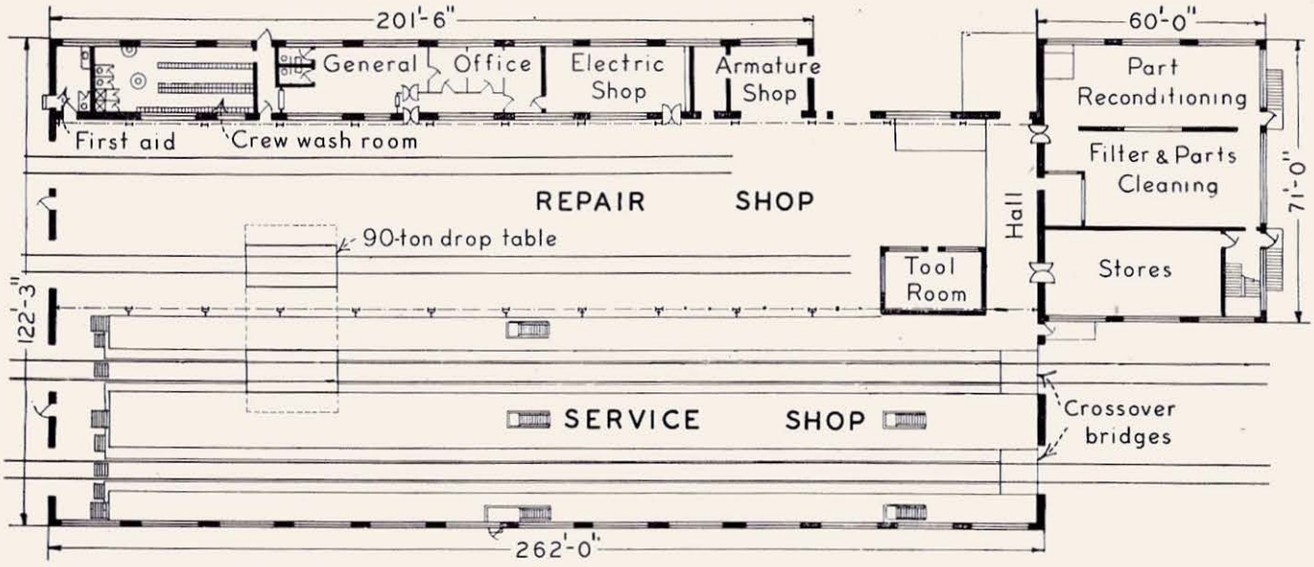
EXHAUST HOODS extend full length of tracks in service section. Motor-driven exhaust fans in the roof are controlled automatically.



PIT CONSTRUCTION is of the open-wall type. Local illumination in working areas consists of recessed lights in pit walls and banks of fixtures under platforms.

HIGH BAY, comprising the repair section, has an overhead clearance of 38 ft. 6 in. Truck-release track, served by 90-ton drop table, is at right.

REPAIR SECTION is served by a 30-ton traveling crane having a 5-ton auxiliary lift. At left is corner of small room for storing tools and working equipment.



INTERIOR LAYOUT of the shop in general follows conventional practice. Note that working platforms are connected by electrically operated crossover bridges.

of these fans would quickly lower the building temperature if uncontrolled.

Along the north side of the repair shop are the shop offices, the electrical department, a wash and locker room for the engine crews, and a first-aid room. Rooms for charging storage batteries and for corn blasting motors and generators are also found here.

At the east end of the main building is a three-story annex, 60 ft. by 70 ft. in plan. The basement contains a wash and locker room for the shop staff, a fan room, and a lubricating oil room. On the first floor are a storeroom, a parts reconditioning room, a parts and filter cleaning room, and the foreman's office. The second floor has a lunch room, a lecture room, and an apprentice class room.

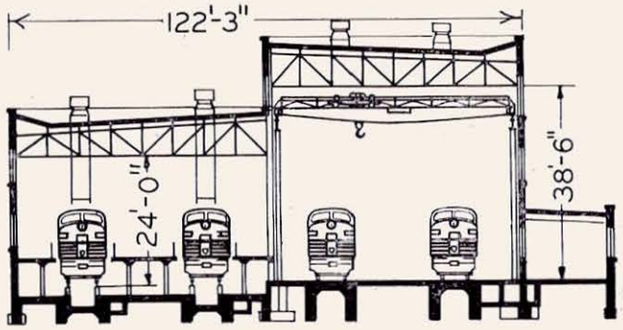
The fan room contains the large fan for supplying heated air to the service pits, which assists in heating this section of the building and also provides direct heat through a series of ducts for thawing out the undercarriages of locomotives during the winter.

The lubricating oil room contains new and used lubricating oil storage tanks with related pumps and equipment for supplying oil under pressure to various points in the shop and also for loading and unloading new and used oil.

The parts and filter cleaning room provides facilities for cleaning and reoiling the re-usable air filters of locomotives and coaches and for cleaning engine parts. The filters are cleaned in a centrifugal-type machine and the parts in a tank with agitated basket. The parts reconditioning room contains complete equipment for the repair and overhaul of various items making up the main engine assemblies.

Instruction Facilities

The lecture room is used for the instruction of shop and operating employees in the proper repair, servicing and operation of the locomotives, and is complete with sound movie and slide projectors. There is an adjoining



CROSS SECTION of the shop. The concrete foundation is supported on 947 piles driven to rock.

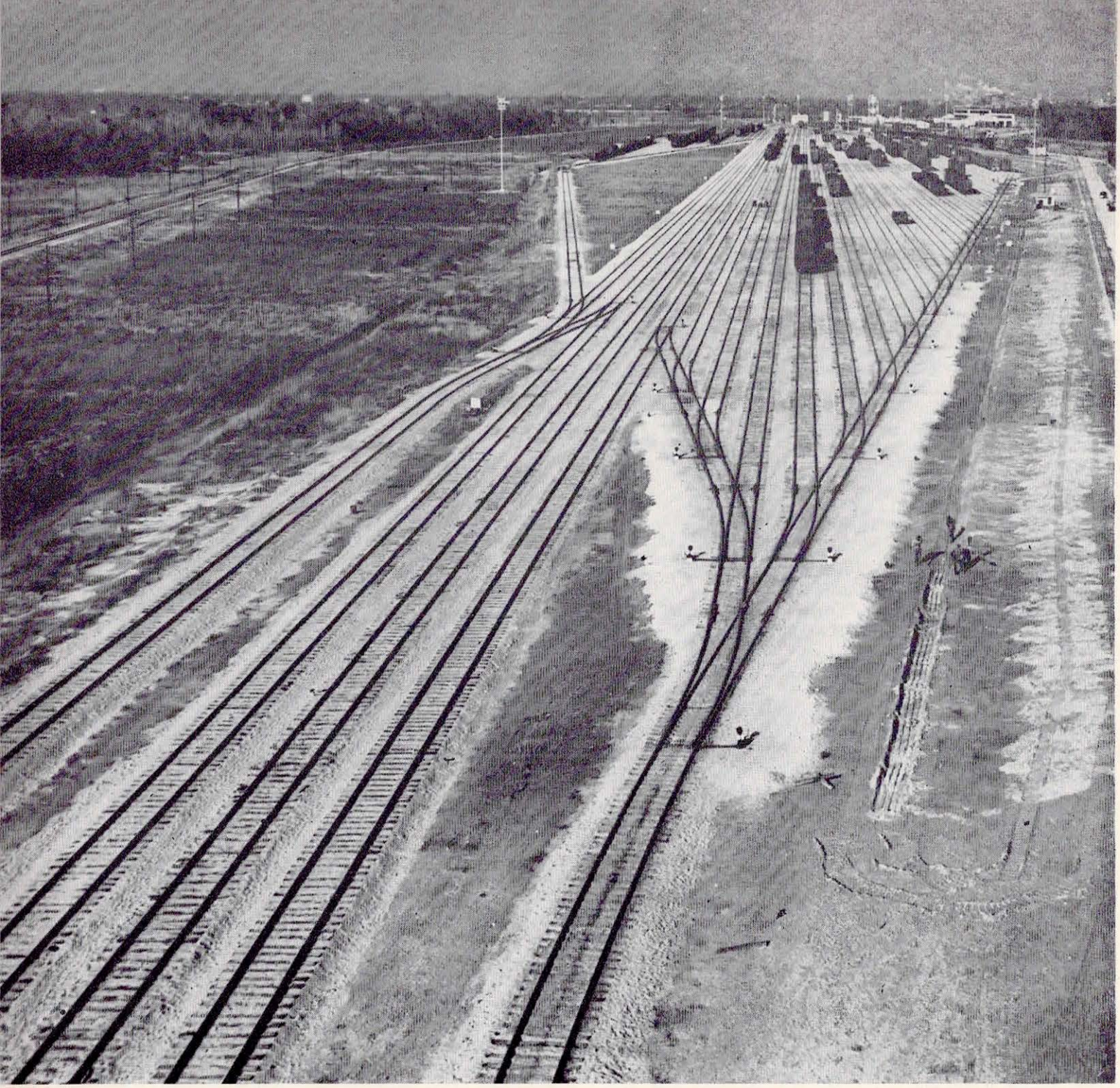
space with drafting tables for instruction of apprentices.

The building construction consists of a reinforced concrete foundation supported on timber piles driven to rock. The superstructure has a structural steel frame with brick walls and a precast-concrete insulated roof. Glass panels, with ventilating sash incorporated in them, are used extensively for window areas.

A service tunnel under the shop tracks connects the existing steam locomotive shop with the diesel shop. This tunnel, which is 5 ft. high, 6 ft. wide and 145 ft. long contains the pipe lines and conduits carrying electric power, steam, cold water, condensate return, compressed air and telephone lines.

Lighting in both the high and low bays is by mercury-vapor lamps with alternate incandescent fixtures for color correction. The lighting intensity ranges from 40 to 50 footcandles at the working plane.

Preliminary drawings and design layouts for the new shop were prepared by the road's engineering department under the supervision of T. D. Saunders, chief engineer. Detailed drawings and specifications were provided by Proctor, Redfern & Laughlin, consulting engineers, Toronto, Ont. Construction was supervised by railway personnel.



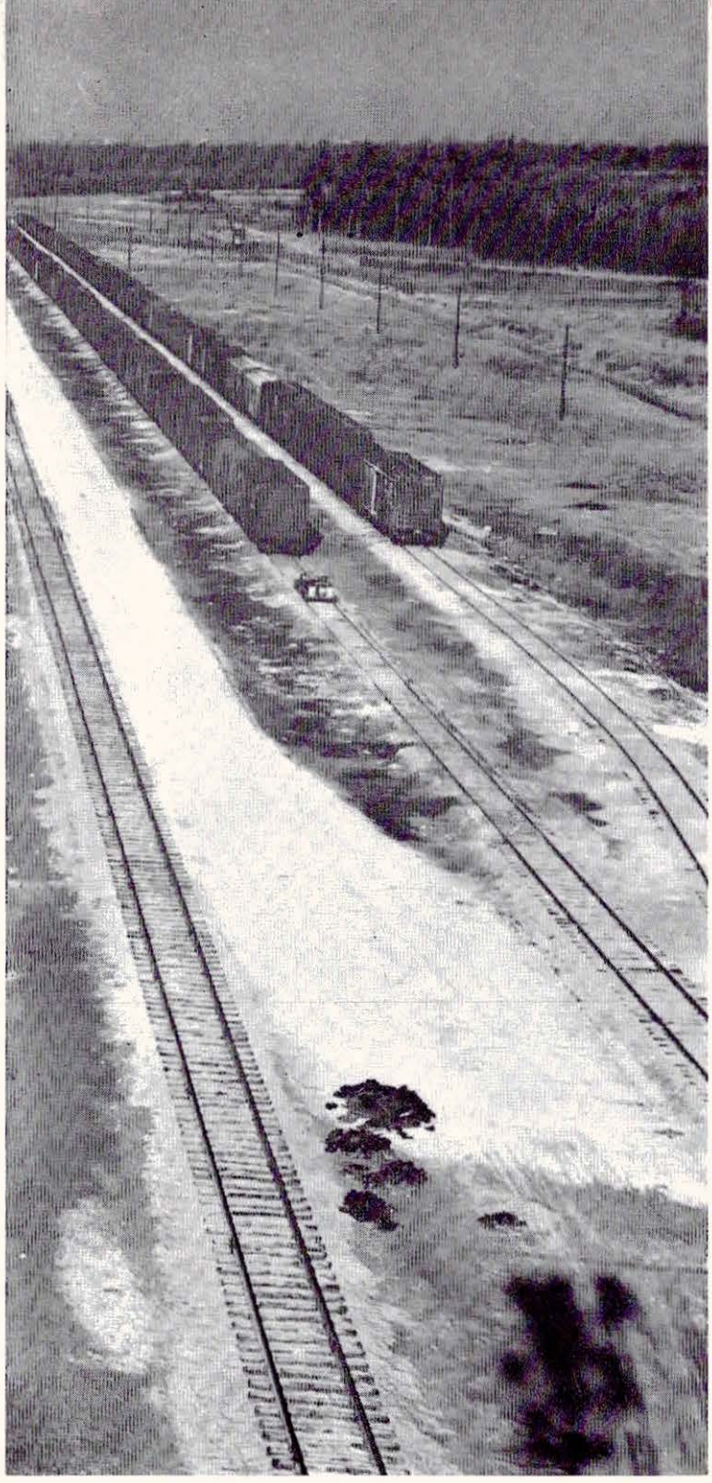
The new yard of the Seaboard Air Line at Savannah, Ga., is a reminder that not all new yards being built today are of the retarder-classification type.

The Seaboard management is convinced that at this location any other type than its flat-switching yard would not be as satisfactory because of the large number of cars of perishables handled in block or partial-block trains, which can be switched promptly in the flat-switching yard and be made into trains. The railroad reports that it is not at all unusual for these cars to be outward bound within 35 min. after their arrival in the yard, a feat which the road feels could not be duplicated in a retarder-classification yard.

The former facility at this point consisted essentially of three relatively small yards, in which the tracks were insufficient both in number and in length. These conditions frequently brought about delays in switching owing to conflicting switch movements between the yards, and compelled holding some incoming trains out of the terminal because the main track along the yard was being used for doubling purposes. Another undesirable characteristic from the standpoint of efficiency and safety was that all leads in the old yards were on curves. Furthermore, the old shop facilities were designed for steam operation so that the servicing and maintenance of diesel power, now used exclusively on the Seaboard, could not be handled with maximum efficiency.

The Old Terminal

The old terminal was bounded by other railroads and streets so that it could not be further enlarged. However, increasing traffic, resulting from the national



This $3 3/4-Million Terminal . . .

- Accommodates longer trains
- Increases yard capacity
- Consolidates switching in one yard instead of three
- Eliminates train congestion
- Reduces car time in terminal
- Effects safer yard-operating conditions
- Provides faster diesel locomotive servicing
- Results in better diesel locomotive maintenance

defense program and the expanding industrial activity in the Savannah area, made a larger and more efficient terminal essential. As a result, it was decided to build new shops and a classification yard on a 490-acre tract near Telfair Junction, where the road's lines from Montgomery, Ala., Columbia, S. C., and Charleston, S. C., converge with the line from Jacksonville, Fla.

The New Terminal

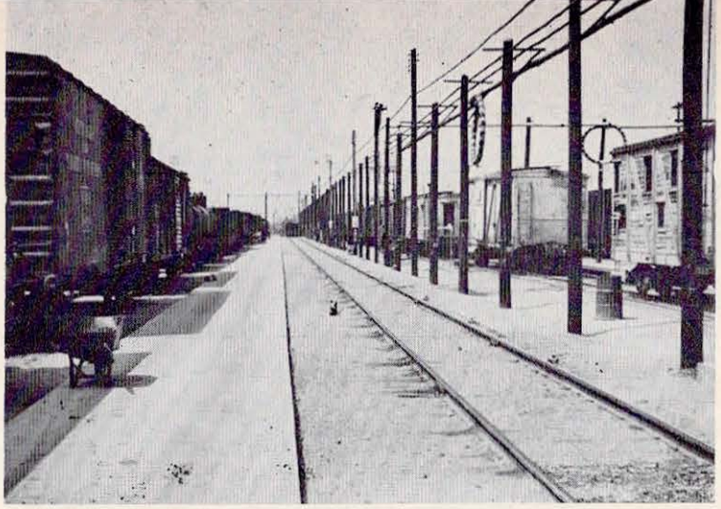
Constructed over a period of a year at a cost of $3,724,000, the new freight terminal eliminates the former operating objections. It provides increased car capacity—2,400 cars as compared with 1,800 cars for the old facility—and new shops designed solely for diesel power. It includes a 41-track classification yard, a running track, two car-cleaning tracks, two icing tracks and an icing station, a new yard office, and car-repair facilities.

The tracks in the classification yard vary in capacity from 23 to 150 cars, with three accommodating 150-car trains and four 100-car trains. Seven of the longer tracks are used for both receiving and dispatching. All switches are equipped with stands having electric lamps, which are automatically turned on by a solenoid switch.

Adequate Switching Leads

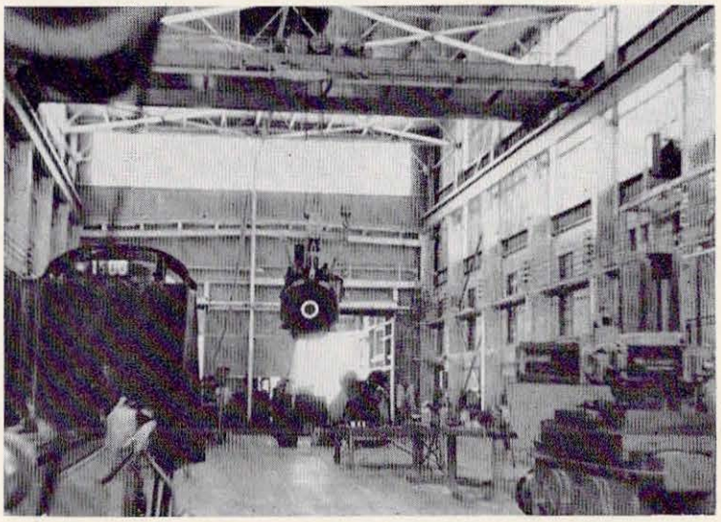
One essential of any well-planned flat switching yard is adequate switching leads. The SAL has incorporated four of these in its new yard, two at each end. They

THE NORTH END of the yard contains the yard office (center) and terminal facilities for repairing and servicing.



CAR-REPAIR FACILITIES include widely spaced reconditioning tracks served by concrete platforms . . .

DIESEL SHOP (upper center) includes large storehouse (low bay) for supplying all parts needed in the . . .



. . . HEAVY-REPAIR SECTION in high center bay where engines, generators and motors are repaired, and the . . .

are so arranged as to practically eliminate conflicting drilling movements.

Also, these leads are separated sufficiently from adjacent tracks to provide safe working room for the switchmen. A running track, extending from the south end of the yard to the diesel shop at the north end, was constructed along the east side. Switching performance to date shows a saving of at least two hours on every car handled in the new yard as compared with the old.

The Yard Office

The yard office is a two-story building at the north end of the yard which houses the terminal trainmaster, yardmasters, crew clerk, yard clerks, radio and telephone equipment, and wash and locker facilities for road and yard employees. One yardmaster controls switching work within the yard, while the other directs by radio all movements of switching crews in the city of Savannah as well as the interchange of cars with the Southern, Central of Georgia, Atlantic Coast Line, and Savannah & Atlanta.

The switching of cars from a northbound train is sometimes started before the conductor of that train arrives at the yard office with the waybills. For this reason and because the train is switched from both ends of the yard, it is not the practice to sort the waybills until just before the train is ready to leave. Also, cars are frequently diverted while they are being switched. The reconsignment of cars of perishables numbers up to 250 a day.

Although Savannah is not a regular icing point, an ice house and an "island" icing dock, capable of serving 20 cars on each side, were constructed between two icing tracks to care for "hold" cars and any others that may require special refrigeration. Empty refrigerator cars are "blocked" back to the road's yard at Baldwin, Fla., just south of Jacksonville.

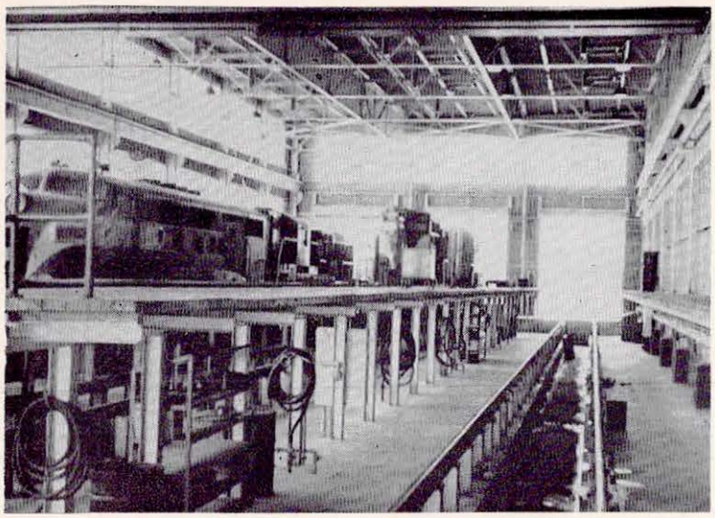
At present about 75 unloaded cars a day must be cleared of trash and such debris as paper, clay, and nitrate of soda. For this purpose two tracks, each having a capacity of 50 cars, were constructed at the east side of the yard near the south end. After being cleaned, the cars are tagged to show the commodity they are suitable to handle. Also, several tank cars are washed and cleaned each day near the north end of the car-repair facilities.

Spacious Car Facilities

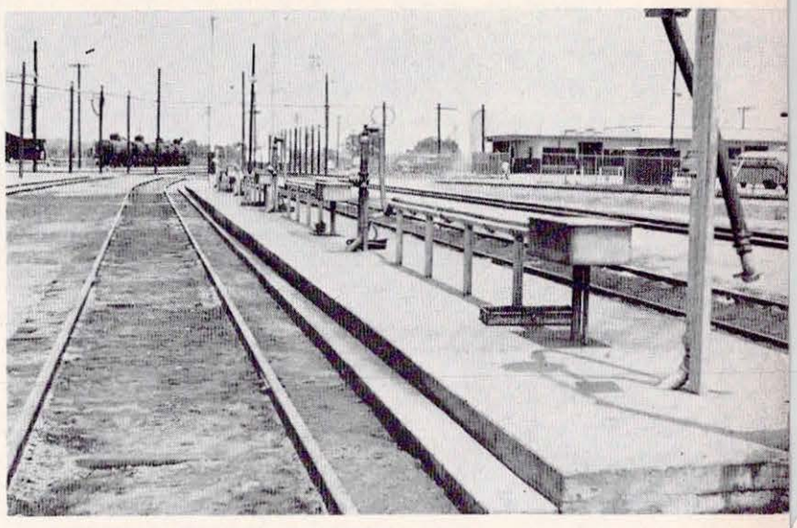
The car-repair area is on the east side of the yard at the north end. It includes a wheel-storage platform, a planing mill, a car shop, and wash-and-locker facili-

. . . AN AIR-BRAKE testing room, and . . .

. . . A PLANING MILL with ample working space.



. . . RUNNING-REPAIR SECTION where diesel units are inspected and maintained. Units are serviced at a . . .



. . . WATER-SAND-FUEL STATION located at the north end of the shop.

ties. These buildings are served by three through tracks, one stub-end track and a track for the derrick train.

One of the striking aspects of these facilities is the impression given of spaciousness. The tracks are on 24-ft. centers and each is served by a concrete platform 8 ft. wide.

The buildings are not only set back a substantial distance from the tracks but also have well planned interiors that allow plenty of room for each work operation. Concrete driveways connect the buildings with each other and with the reconditioning tracks so mechanized handling equipment can be used.

Both foreign and system cars are upgraded from Class C to Class B at this point. Light running repairs are made to about 40 revenue cars a day, as well as to 20 employee bunk cars and 3 cabooses a month. The forces at Savannah are also engaged in reweighing, repacking, cleaning air brakes, adjusting piston travel, etc.

Heavy and Running Repairs

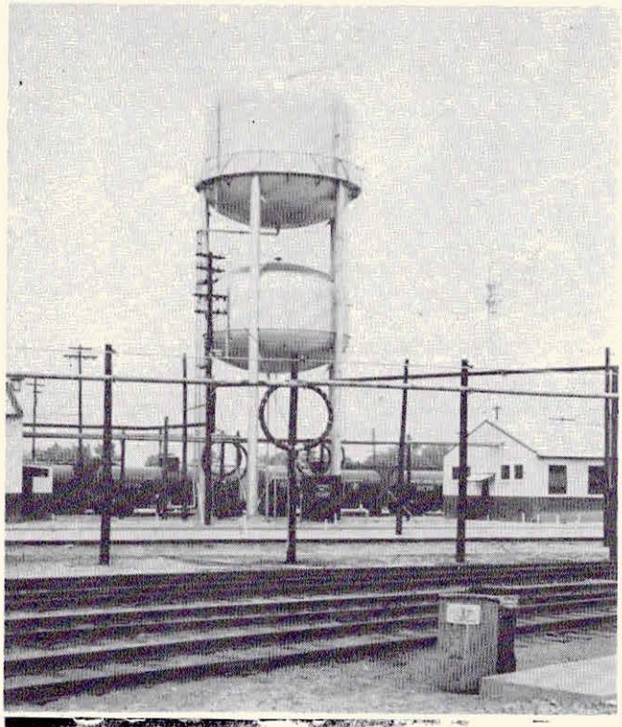
The diesel shop and its adjuncts, situated just east of the car-repair facilities, make Savannah, from the standpoint of power, the important point on the Carolina division.

There are 55 diesel locomotives assigned to this shop for repair and maintenance. In addition, this shop does such heavy-repair work as replacements of generators, traction motors and engines, painting, and general overhaul on diesel units from other divisions.

Main Shop Building

The main shop building is a rectangular steel-frame structure with Johns-Manville corrugated asbestos siding and a built-up roof. It has three main bays which run the length of the shop. The center bay is the highest; it is used for heavy repairs. The adjacent easterly bay is slightly lower in height and is used for carrying out running repairs and maintenance. The westerly bay, which is the lowest, is used for housing a large storehouse, an office, an air-brake shop, an electric shop, and a record room. Another adjunct was constructed along the north side of the storehouse bay to house a small-parts and filter cleaning room, toilet facilities for use of the shopmen, and offices for the master mechanic, shop foreman, and their staffs.

The heavy-repair section is served by two stub-end tracks at floor level and a 20-ton Shepard-Niles overhead crane. One of the striking features of this section is the abundance of daylight, which is admitted through corrugated wire-glass fenestration carried around the entire upper part of this section. Immediately south of this section is a shed housing a drop pit, which con-



THREE KINDS OF WATER are stored in a water tower having two tanks. The upper tank contains drinking water. The lower tank has a tank within a tank, one having radiator-cooling water and the other boiler water.

nects the two tracks and which, in turn, is served by a 6-ton Robbins & Meyers overhead electric monorail hoist for carrying heavy parts to an outside cleaning platform. A shop for painting locomotives is in a building north of this section.

Running Repair Section

The running-repair section is served by three through tracks which are carried above a depressed-floor level on steel pedestals. Each track has an inspection pit extending for the full length of the building and is served on each side by conventional elevated work platforms.

Two other tracks serve the east side of the storehouse bay, and one is extended to serve eight outside storage tanks for kerosene, car oil, lubricating oil, and bunker "C" oil. The tanks are equipped with heating coils, and a nearby pumphouse contains eight pumps, four for "lub" oil, and one each for kerosene, used oil, bunker "C" oil, and car unloading.

Road engines are uncoupled from their trains after arriving at Savannah yard. After crews place them on the inbound engine track, they are taken by hostlers to an outside inspection pit on one of three tracks which pass around the diesel shop. Any repairs that can be made without shopping the locomotive are made there. After inspection the locomotives are taken to a washing platform, then to a combination fuel-water-sand station, after which they are placed on a "ready" track. Outgoing crews pick them up from there and take them to outgoing trains in the yard.

Separate servicing facilities are provided for the switch engines at the north end of the yard to avoid congestion and loss of time when changing crews. These facilities include an inspection pit and a fuel-water-sand station. Switch crews place their engines here for servicing when going off duty. When these units are due for their regular inspections, or when heavy-repair work is called for, they are brought into the diesel shop.

A power plant, housing an air-compressor room, a steam-generator room with two Amesteam automatic steam generators, a water deionizing plant, a transformer room, and a fire-pump room, were constructed at a central location for supplying compressed air, water and heat to the terminal.

Water Supply System

The water-supply system includes an elevated water tank structure which stores three kinds of water. To the casual observer, the tower appears to hold two tanks, one above the other. But the lower tank also contains an inside tank. The upper tank contains potable water used for domestic and fire lines, and the lower contains radiator cooling water in the inner tank and boiler water in the outer one. The radiator water is piped to the two fueling stations for supplying both the road engines and the switchers, and to the inspection pits within the diesel shop. The boiler water is piped only to the fueling station where the road locomotives are serviced.

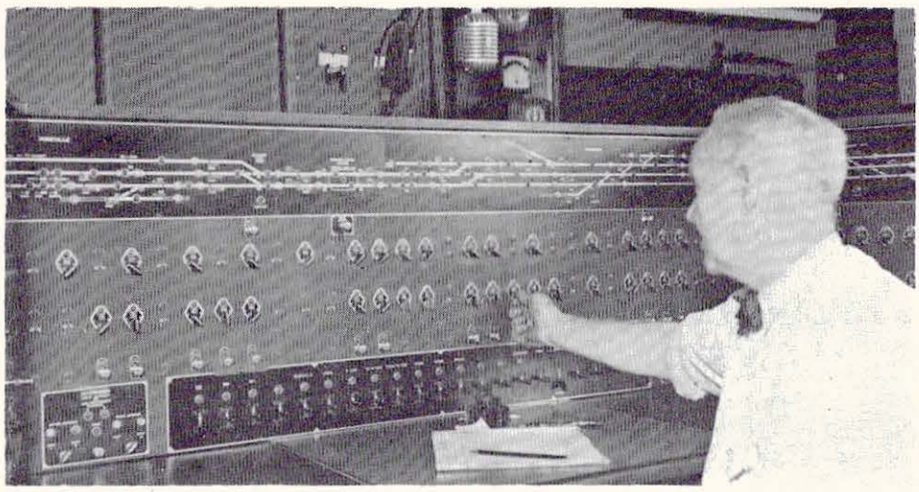
Although Savannah is not in a part of the country where heating would seem necessary for employees comfort, the normal January temperature averages 52 deg. F., with an average low of 44 deg., and the thermometer has gone as low as 8 deg. F. So a heating system was installed, this being a two-pipe reversed-return forced-hot-water system, with the pipes carried overhead from the power plant to the respective buildings.

Floor panel (radiant) heating was installed in the diesel shop and in the paint shop. These systems each have an Aquatrol mechanism. A proportioning-type temperature sensing device mounted indoors has an outdoor sensing element. This reacts to outdoor temperatures and controls the operation of a modulating-type motor to proportionately reset the control point of a remote-bulb temperature controller. The controller has its sensing element in the supply water line and operates a modulating three-way mixing valve to maintain the required supply water temperature.

The outdoor temperature-sensing device also controls a motorized steam valve installed downstream from a pressure-reading valve so that when the outdoor temperature is 65 deg. F., or above, the steam valve is closed and, when the temperature is below 65 deg. F., it is open. Modulating-type room thermostats are employed to modify the control signals and compensate for room temperature changes.

Wrought iron pipe was used for the steam condensate lines, the hot-water space-heating distributing lines and floor coils, and the hot and cold water domestic lines. The joints in the floor-coil heating system were welded.

This project was carried out under the general direction of W. D. Simpson, chief engineer.



THE LEVERMAN has control of interlockings at Newark, Harrison and Kearny Junction.

3-Interlocking Consolidation

... USES MULTIPLEX HIGH SPEED CODE

Lackawanna's control system transmits 25 controls and 50 indications per second—Complete route set up with one code—Control machine includes route indication lamps, and other aids for rapid manipulation

At Newark, N. J., the Lackawanna has installed a new tower and control machine replacing previously existing separate interlockings at Kearny, Harrison and Newark. Capacity is also available for control of the interlocking at Roseville Avenue (Newark) if it should be desired. All of these interlockings are of the electro-pneumatic type, and each was previously controlled locally by a Union Model-14 interlocking machine.

Hoboken, N. J., across the Hudson river from New York, is the eastern terminal of the Lackawanna. Newark is 8 miles west of Hoboken on the main line via Summit, N. J. This is used primarily by passenger trains, the through freights being operated over a different route. On a normal week day, the traffic through Newark includes 233 passenger trains and 30 local freights which deliver and pick up cars at warehouses, coal yards and freighthouses on this line. During the two-hour morning peak period between 6:19 a.m. and 8:24, about 55 suburban trains pass through Newark. An equally large number of trains are handled in a similar period in the evening.

From the east, three main tracks and a yard lead approach Kearny Junction, which includes three crossovers, two single switches, two derails and 10 home signals. Three main tracks and a siding extend west from Kearny Junction to Harrison. Near the west end of the Harrison layout, the three tracks converge to two which extend across the Passaic river over a draw bridge, with supervisory control from Newark tower. Thus the entire Harrison layout includes five crossovers, two single switches, two derails and 19 home signals. The Newark area starts with the westward home signals for the drawbridge, and includes four derails, one signal switch, two crossovers and 13 home signals.

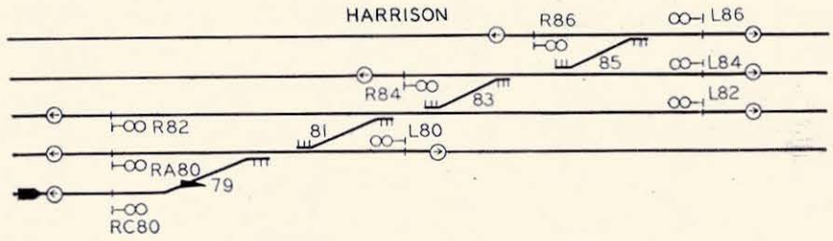
The electro-pneumatic switch machines and the color-light home signals throughout this area were kept in service. Consolidating the controls of the three replaced interlockings includes two features of special interest.

High Speed Codes

This interlocking consolidation controls all switch, signal and associated functions at both remote interlocking sections (Harrison and Kearny Jct.) from Newark over a two-wire line circuit.

The control of these functions is effected by a new high-speed multiplex code system which employs high frequency carrier energy for the concurrent transmission of control and indication information at the rate of 25 controls and 50 indications per second. Each remote section of the interlocking has its own separate code system so that coding action to the two sections can be concurrent.

Each code to Kearny Jct. consists of 32 steps with a capacity of 32 controls and 60 indications, of which 21 controls and 54 indications are now being used. The Kearny Jct. system employs 19.1 kc. and 21 kc. for the transmission of controls, and 11.0 kc. and 12.0 kc. for the concurrent transmission of indications. The Harrison system employs 23.0 kc. and 25.4 kc. for the transmission of controls and 13.3 kc. and 14.6 kc. for the concurrent transmission of indications. Each code to a remote section of the interlocking contains complete information for every function in its associated remote



PORTION of the Harrison interlocking involved in routing a train (at signal RC 80) as described in the text.

section, so complete routes can be set up with one code.

This system, by the use of fast-operating relays for stepping, and by the use of different frequencies to obtain simultaneous or concurrent transmission of control and indication information, attains a speed of transmission that is, for all practical purposes in this project, as satisfactory as instantaneous control by direct wire.

The control machine has new features. Its center panel is 60 in. long, with a wing section 30 in. long at each end, thus totaling 120 in. of panel length; all 54 in. high. The illuminated track diagram, at the top of the panel, has a white line ¼ in. wide to represent each track. On these lines small red lamps, which are normally dark, are lighted when corresponding track sections are occupied.

At each place on the diagram corresponding with a home signal there is a symbol of a signal which has two normally-dark repeater indication lamps; a red one to repeat the Stop aspect and a green one to repeat a Proceed aspect. Under certain conditions these lamps are flashing, as will be explained later. At each location on the diagram corresponding to a place where a train can depart from home signal limits, there is a white lamp with a black arrow pointing in the direction of departure. This arrow is illuminated during certain phases of manipulation.

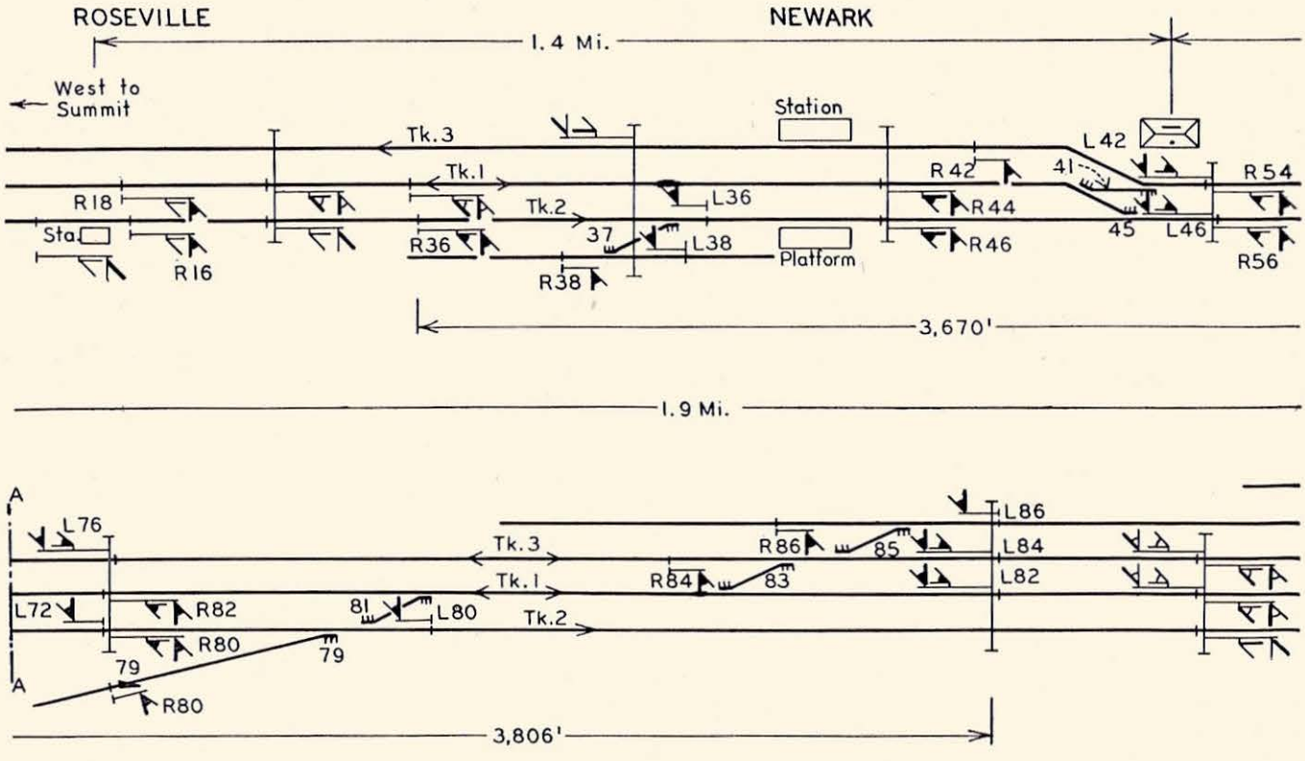
The levers are the so-called paddle type, which are pivoted at the center on a horizontal shaft, extending into the machine. The switch levers, which are painted black, are in the upper row. To move such a lever, it is first pushed, then turned 90 degrees, then released.

Above each lever there is a single red indication lamp which is normally extinguished. This lamp is flashed when the corresponding switch is in a position out of correspondence with its lever. This lamp is lighted steady when the control of the switch has been removed, electrically, from the lever.

The signal levers, which are red, are in the second row. Each of these levers normally stands on center, with the paddle edge vertical. It is turned 45 deg. to the left to clear an *L* signal, or 45 deg. to the right to clear a corresponding *R* signal. However, such operation of a lever actually requires four separate motions: (1) push, (2) turn, (3) release, and (after a check of the route) (4) a final push. A red lamp over each signal lever, normally dark, is lighted during certain phases of manipulation.

A Typical Manipulation

With all levers normal and no trains present, all the indication lamps on the panel are dark. The manipulations to set up a route for a train to enter at home signal RC80 and to depart at L86, are as follows:



The leverman pushes, turns, and releases the switch levers 79, 81, 83 and 85. As each of the levers is reversed, the red lamp over it starts to flash, denoting disagreement between the lever and the switch it controls. (The code to control these switches does not go out until later.)

Next the leverman pushes, turns, and releases signal lever 80 moving it from the normal to the *R* position. As the lever is positioned to *R*, the lamp over it starts flashing, denoting disagreement between the lever and the signal it controls, and a code is transmitted to Harrison to control the switches in accordance with the positions of their respective levers. The clear signal control is not included in this code. When the switches operate in response to this control code, an indication code is returned to the Newark control machine, and the indication lamp above each of the switch levers stops flashing.

Two Indications

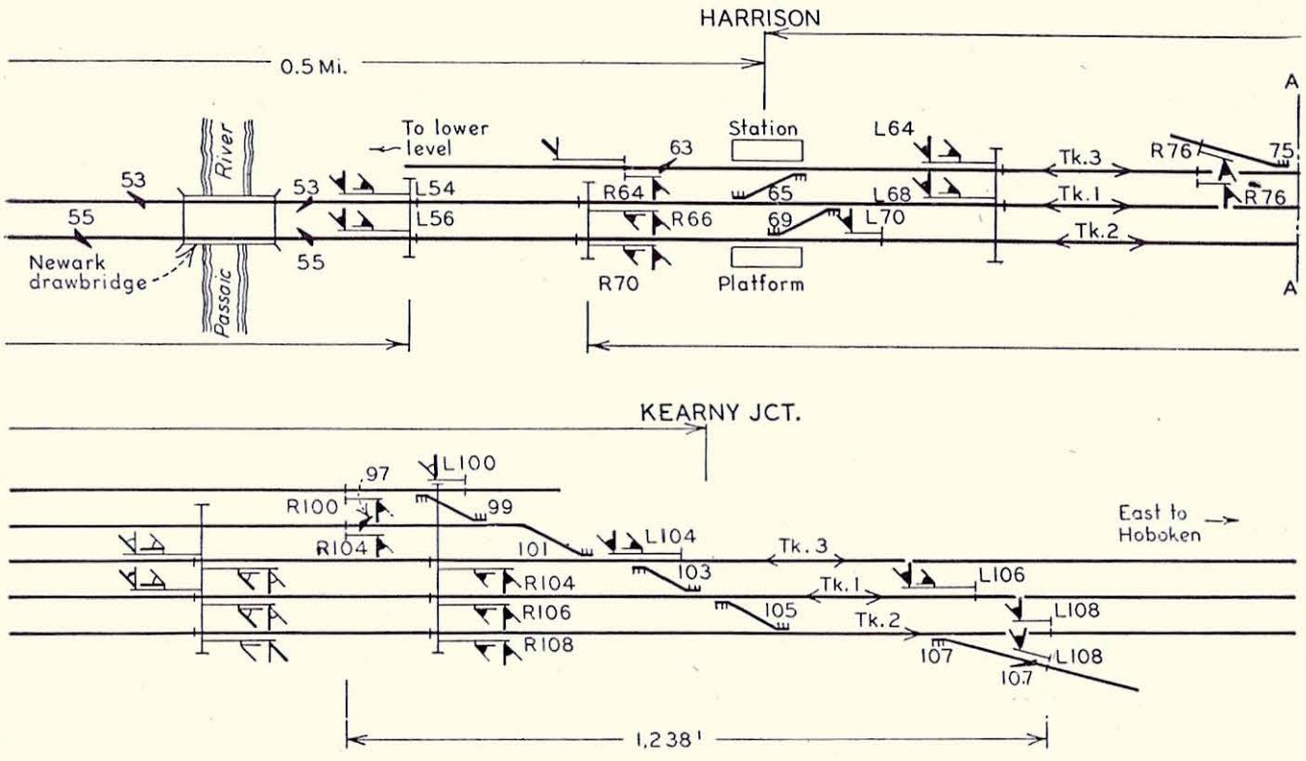
In addition, to indicate to the leverman that the switches and crossovers are now lined up properly—so a train may proceed from signal RC80 eastward to the exit at signal L86—two indications appear: (1) the red lamp in the symbol for signal RC80 (where the train will enter) is flashing and (2) the lamp is flashing in the exit arrow (pointing east) adjacent to the symbol for signal L86 where the train will leave home signal limits. Thus the leverman has a quick optical check that the route has been established and is ready for him to clear the signal, which he then does by taking the final action in operating the signal lever, i.e., he pushes it.

On the other hand, if the red signal lamp and flashing light arrow did not appear at the beginning and ending of the route he intended, the leverman would instantly know that the switches were not lined for the route he wanted, and, therefore, he would not take final action to clear the signal. The circuits for this operation are such that all the switches involved move at once. This is referred to as "packaged, or one-cycle routing." All switch controls are thus set up in one code cycle.

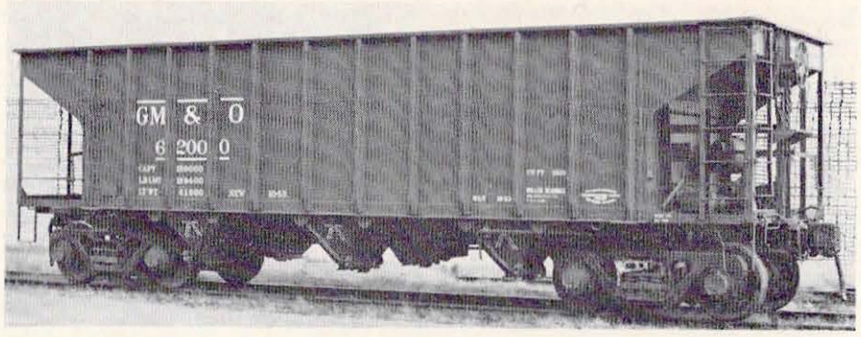
If the indication lamps did show that the switches were lined for the route intended, and the leverman had given the signal lever its final push, this action electrically removes (in the control machine) the control of all switches from the levers involved in the route before signal control character is transmitted, which is noted by a steady red light over each of these switch levers.

The flashing lamp over the signal lever will continue to flash, but the flashing white exit arrow lamp and the flashing red lamp in the signal symbol will be lighted steady. As soon as the signal clears, and an indication to that effect has been returned to the Newark control machine, the flashing light over the signal lever and the red light in the signal symbol are extinguished, and a steady green light is lighted in the signal symbol. The steady red light over each of the switch levers continues to be lighted, as an indication that electric locking is effective in the machine. These steady red lights over the switch levers can be extinguished only by a code from the field to the effect that their lock relays are energized. Operation of such a lever when the lever light is burning will not be effective in operating the switch.

This consolidation of interlockings was planned and constructed by Lackawanna forces under the direction of J. R. Heisler, signal engineer, the major items of equipment being furnished by the Union Switch & Signal Division of Westinghouse Air Brake Company.



SAMPLE 95-TON ore car and group of railroad and supply men assembled to inspect it at the Bessemer, Ala., plant of Pullman-Standard.



HIGH-CAPACITY ore car (left) which closely follows PS-3 design, utilizes welded construction practically throughout and has no open interior seams or rivet heads to obstruct unloading. **END VIEW** (right) showing sturdy construction, one-wear wrought steel wheels, empty and load brake equipment and, in this car, the Miner hand brake.

95-Ton Ore Cars for Four Roads

One thousand 95-ton hopper cars—designed primarily for the movement of Venezuela iron ore from docks at Mobile, Ala., to the T.C.I. Division-United States Steel mills at Birmingham—are being constructed by the Pullman-Standard Car Manufacturing Company for four railroads as follows: GM&O, 300 cars; Frisco, 200 cars; Southern, 250 cars; L&N, 250 cars.

The first sample car, assigned to the GM&O and exhibited at the Bessemer, Ala., plant of Pullman-Standard October 14, was thoroughly inspected by representatives of the four railroads and the various specialty companies interested.

Considerable preliminary study and comparison of experience of the four railroads and the car builder were made before deciding upon the essential features of ore cars best adapted to handle this particular traffic. The final design is patterned along the lines of Pullman-Standard's PS-3 hopper car using welding for most of the assembly work. There are no open seams inside of the car and the floors are entirely free of rivet heads or other obstructions that would interfere with the out flow of ore.

The car is primarily designed for unloading in a car dumper but on occasion will be unloaded through the doors for stock piling iron ore.

Principal weights and dimensions of the car are as follows: Light weight, 61,600 lb.; load limit, 189,400 lb.; cubic capacity, 1,629 cu. ft. level full; inside length, 29 ft. 8 in.; length over strikers, 36 ft.; inside width, 9 ft. 7¾ in.; height from rail to top of car, 10 ft. 8 in.; truck center spacing, 26 ft.

The thicknesses of important structural sheets included in the car superstructure are as follows: side sheets, ¼ in.; hopper chutes, longitudinal hoods, crossridge sheets, and floor sheets and doors, ⅜ in. The side and end plate bulb angles are 5-in. by 4½-in. by 7/16-in.

This particular car design shows the diversification possible in various important specialties without interfering with the production of cars. For example, a few of the main items of specialties selected by the various roads are as follows:

Door locks—The GM&O specified Keystone "Monoloc"; Frisco and Southern, Wine Hooks; and L&N, Enterprise Latch type. For door frames GM&O and L&N specified Pullman-Standard; Frisco and Southern, Wine cast steel.

All cars are to be equipped with ABEL 1,010 empty-and-load air brakes, D-11-311-D pneumatic slack adjusters, a new type of Pullman-Standard auxiliary uncoupling device and Hyatt roller bearings.

A large number of rubber draft gears of the Miner, National and Waugh types will be used on the cars.

PALLETS are arranged on each side of doors convenient to truck tailgates.

IN T&NO FREIGHTHOUSES . . .

More L.C.L. With No More Men

Effective use of mechanical handling equipment and a rigid rule against "set back" cars help expedite freight, thus building up business

Mechanization of its freight stations has enabled the Texas & New Orleans (Southern Pacific Lines in Texas and Louisiana) to handle an increasing volume of l.c.l. freight expeditiously and without significant additions to freight handling forces. Tonnage handled by the railroad and its trucking subsidiary, Pacific Motor Transport Company, increased 45 per cent from 1950 through 1952. Officers of the T&NO believe one of the reasons for this increase is the expeditious handling given l.c.l., which in turn is due in part to the mechanical handling equipment. At one of the road's larger stations, New Orleans, the routine of handling about 250 tons of l.c.l. per day involves the use of mechanical handling equipment.

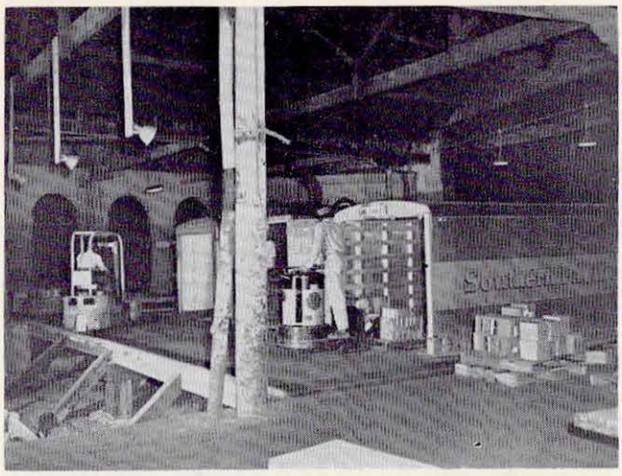
The advantages of mechanization are many. Among others:

- The railroad is handling an increased volume of business with no increase in force.
- Faster loading of freight has encouraged more shippers to use the T&NO.
- The safety record in the mechanized stations since they got such equipment has improved materially.

The T&NO operates west from New Orleans, serving hundreds of communities in Texas and Louisiana with package freight service on the main line and on branch lines. Many communities not on the railroad also are reached daily by delivery trucks operating from stations along the line.

At the freighthouse on Lafayette st. in New Orleans the employees take pride in careful handling of merchandise, and in following the rule that most freight, regardless of the hour it is received, leaves the shed that night and is at or near its destination by 8:00 in the morning. One of the things that makes this performance possible is the use of modern materials handling equipment.

The outbound freight shed at New Orleans is 361 ft. long by 117 ft. wide. Along each side is a concrete dock 40 ft. wide running the full length of the building. In the center and running almost the full length are three tracks, each long enough to hold seven freight cars. Along one side of the building is a driveway to accommodate 24 trucks delivering outbound merchandise to the shed. On the opposite side is a siding and four



BOTH FORK LIFT and pallet trucks are used at New Orleans. Trucks deliver pallet loads to cars or trucks.

TURRET PALLET truck works well in crowded quarters inside cars.

SPOT NUMBERS are posted in a readily visible manner. Spot number 20 is on track three, etc.

doors for loading and unloading freight cars. It is on this track that cars with transfers from connecting lines are unloaded. It is also used for extra cars needed to load out freight beyond the capacity of the 21 cars inside the shed. At the front of the building is a bay for backing three highway trucks to a dock for loading. This short dock connects with the two long ones.

The greatest activity occurs between 3:00 p.m. and midnight when merchandise originating in New Orleans is brought to the shed and loaded out. Some of it is brought in by drayage firms and individual shippers but most of it is picked up and brought in by SP trucks. The truck driver turns in to the receiving clerks the bills of lading covering each shipment on his truck and backs up to one of the 24 doors to unload. Leaving an aisle open from the back of the unloading doors, seven pallets are placed end to end from the wall between doors toward the center of the dock. This leaves an aisle the width of the truck and directly behind the tailgate.

The driver unloads from his truck all but the heavy and bulky pieces and places the shipments on the pallets. Shipments from one destination only are placed on each pallet to avoid any mix-up in loading. The receiving clerk checks the items against the bills of lading and when each shipment is complete he marks the "spot number" of the car in which the freight will be loaded on one of the packages. During the peak receiving period five or six clerks are assigned to check in the shipments.

Cars are spotted in the freighthouse three abreast. Each line of three cars side by side is called a section. With 21 cars in the shed there are seven sections and to each section is assigned a "pusher" or "car stower." He unloads the pallets that are placed in each car of his section by the lift trucks or transporter and stows the shipment according to his best judgment and training.

Promptly at 6 p.m. all car loading stops and the freight in the cars is leveled off. Bulkheads are put up and steel-strapped into place to prevent shifting of the load during train movement. *This is done regardless of the amount of freight in the cars, as all cars must roll that night.* No car or cars are held over because the load is light. At about 6:30 car doors are closed and sealed and at 6:40 a switch engine pulls the cars from the shed.

There is still much freight on the floor, there are trucks still to be unloaded, and more pick-up trucks will arrive later (until 8 or 8:30 p.m.). All freight not loaded by 6 p.m. is termed "shut out." This does not mean that all of the "shut out" freight will be held over until the next night. The rule that "all of today's moves tonight" still applies and as soon as the car doors are shut the crews start loading freight for Louisiana points into highway trucks operated by the Southern Pacific Transport Company of Louisiana. The highway trucks have designated runs and operate on schedules. If there is more freight than the trucks for any run will hold, additional trucks will be called to handle the load. Some trucks go straight through to one destination while others are "way freights" with many stops. All freight is loaded in station order. At midnight the shed floor will be almost clear, with very little freight remaining. The average daily total of freight handled and shipped is about 250 tons.

Use of modern materials handling equipment at New Orleans and elsewhere on the system began in 1949. The evolution from a hand-trucking operation has been gradual and very successful, and will continue until maximum efficiency is attained.

TAKING THE HEAT OFF....

Bower-Franklin journal boxes, equipped with dependable Bower straight roller bearings, are ready to help you carry more freight — at greater speeds — with no danger of hot boxes.

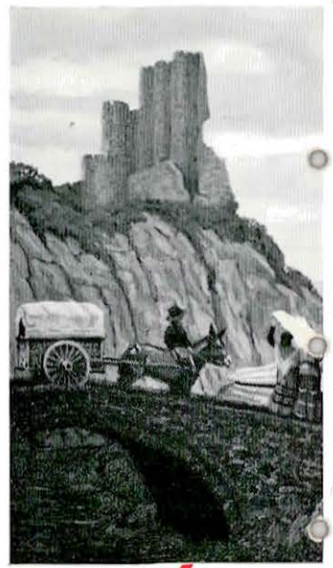
These high-quality bearings have already *proved* themselves in numerous other types of heavy-duty equipment — steel rolling mills, heavy trucks, earthmovers, cranes, shovels, and railroad generator-drive units, to mention but a few.

Sales and application engineering for the Bower-Franklin journal boxes are being handled by the Franklin Balmar Corporation. Additional information will be furnished on request.

FRANKLIN BALMAR CORPORATION

FRANKLIN BALMAR CORPORATION
WOODBERRY, BALTIMORE 11, MARYLAND
CHICAGO OFFICE: 5001 North Wolcott Ave., Chicago 40

How will a.c.f. TALGO affect



The following facts are the results of 3 years of study by a.c.f.'s engineers on the daily operations of a.c.f. Talgo in Spain. This 400 mile express passenger run goes from sea level to 4500 feet, with grades in excess of 2%, literally hundreds of curves and adverse track conditions.

HERE ARE THE FACTS

in terms of passenger schedules a.c.f. Talgo has cut schedule running time on a 400 mile run from about twelve to eight hours. How? Through higher speeds on curves and faster stops and starts.

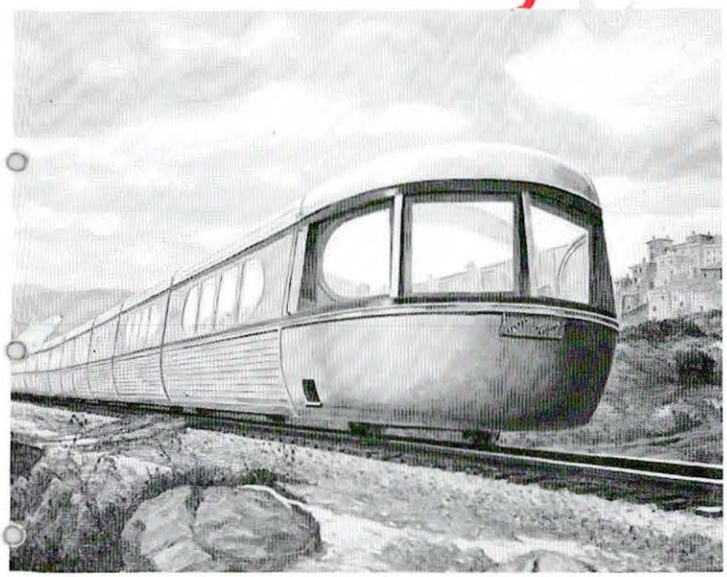
Converted to American rails a.c.f. Talgo can cut passenger schedules of the most modern Streamliners up to 25%... enable Railroads to meet the toughest competition.

in terms of operating costs. Records on Spanish overall operation have indicated savings in excess of 60% over conventional trains, on the same run. Lower weight per passenger, use of a 1150 h. p. locomotive with fuel consumption of .605 gallons per mile are only a few of the reasons.

Converted to American rails a.c.f. Talgo is ideal for long express or short (commuter) runs because 'break-even' costs would be lower. It attracts business by offering faster, more convenient comfortable service.

HENDAYE

American Passenger Service?



The route of a.c.f. Talgo from Madrid to Hendaye on the French border • 400 miles • 11 stops • on relatively poor track conditions in about 8 hours running time.

in terms of on-time arrivals

a.c.f. Talgo has been 'on time' on over 97% of its trips. There were no interruptions in service due to mechanical failure.

Converted to American use a.c.f. Talgo offers exceptional dependability through lower maintenance, simplicity of design, ease of repair.

in terms of initial cost. All initial development and tests have been completed and operating costs are available. The simplicity of both design and construction techniques make possible multiple fabrication economies never before achieved in passenger car construction.

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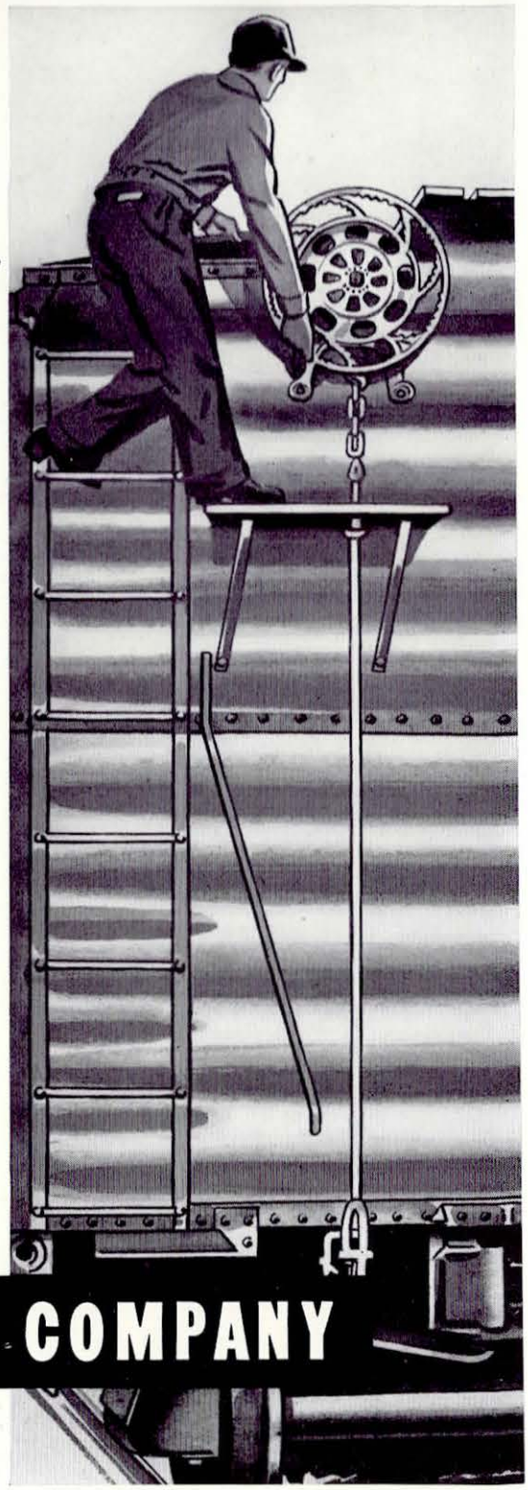

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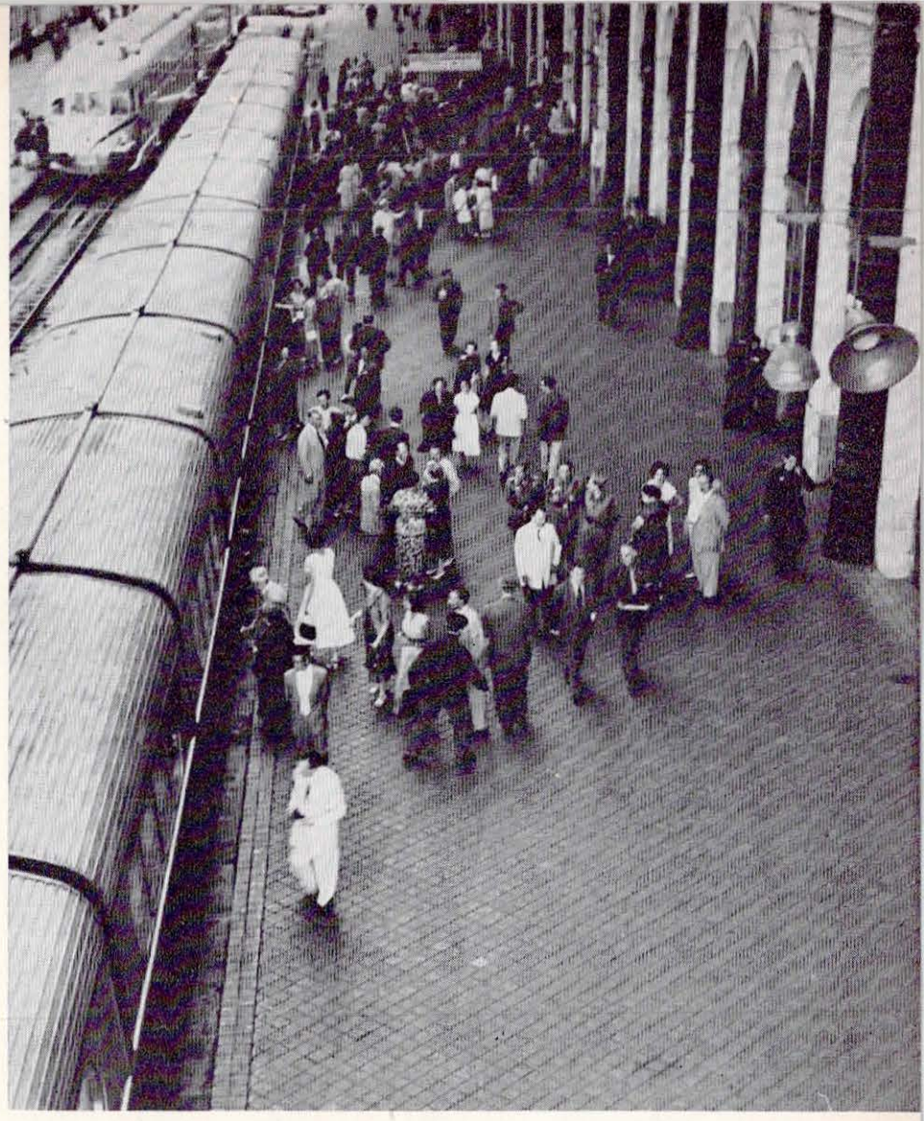
Talgo Trains Popular In Spain

New patronage created — Percentage of seat occupancy high —Meals served to 70 per cent of the passengers



By ROBERT W. SHEARMAN

Since going into regular service on July 14, 1950, the Spanish Talgo trains have operated between Madrid and the Spanish-French border at Irun-Hendaye, a round-trip distance of 794 miles.* Two complete Talgo trains alternate in making the round-trip run. Until May 17 of this year, the Talgo operated from Madrid to Hendaye on Monday, Wednesday and Friday, returning to Madrid on Tuesday, Thursday and Saturday. While it would appear that the two complete Talgo units could support daily service, it was felt that sufficient time should be allowed for thorough maintenance in the Madrid shops between trips; hence, a 48-hr. layover for each unit between runs. This extreme caution was deemed necessary because of the newness of the design principles.

The "bugs" having been ironed out, the schedule was changed on May 17, 1953, to four round trips per week to answer the demands of increased patronage.

The northbound Talgo crosses the border into France, terminating its run at Hendaye, where an assured connection is made with an overnight sleeping-car train to Paris. The Talgo backs across the border and is turned on a wye in Irun, Spain. Southbound, the Talgo originates in Irun where passengers are transferred from the night express from Paris.

The run from Irun to Madrid takes 9 hr. 5 min., making 10 intermediate stops.

Diesel fuel, sufficient for a round trip, is supplied at Madrid. About 600 gal. are used on each round trip.

The Talgo equipment, owned at the outset by the firm of Patentes Talgo, S. A., is now owned by the Spanish National Railways—the "Renfe" as it is known in Spain. The operating crew are employees of the Renfe, but the stewards serving meals and refreshments and caring for passengers' welfare are employees of the Wagon-Lits Company. This organization has the concession for dining service. The firm of Patentes Talgo operates shops near Madrid owned by the railroad, for maintenance of the Talgo equipment.

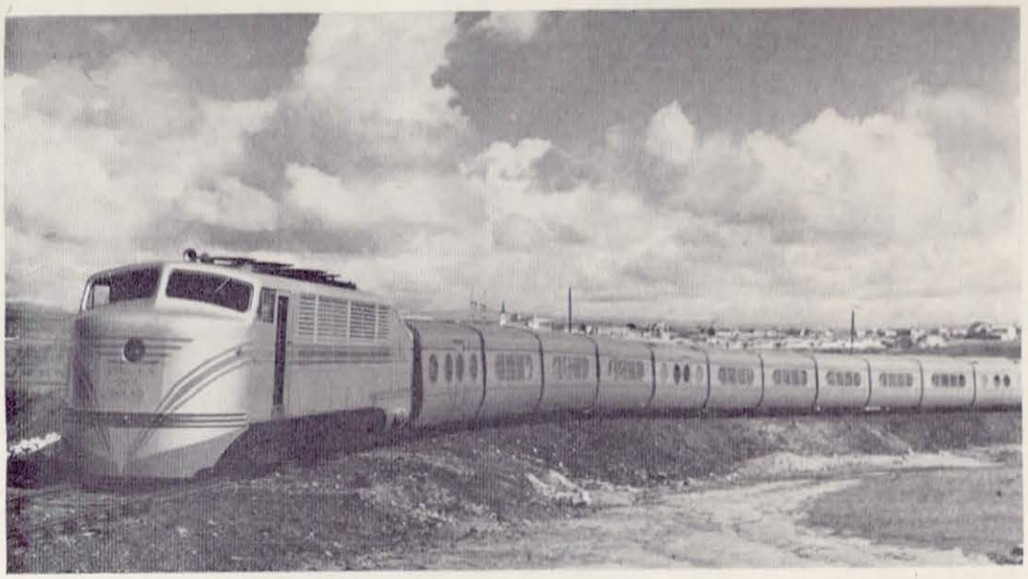
Volume of Traffic

The complete Talgo equipment consists of three diesel locomotives and 32 single-axle units. At the peak of the season, a train consists of a locomotive and 16 single-axle units. This provides seats for 176 revenue passengers. Fewer cars are carried in off-peak periods. For example, with 12 units 128 seats are provided.

Table 1 indicates that the average number of seats available during 1952 was 148.5. The average distance

***For a description of the equipment in these trains, built by American Car & Foundry Co., see *Railway Age*, April 23, 1949, page 30. For an appraisal of the design and prospective alterations of details, based on Spanish experience, see *Railway Age*, October 5, 1953, page 77.**

This article is based upon the author's personal observations and experiences riding the Spanish Talgo.



A TALGO TRAIN on the wye at the Aravaca shops near Madrid.

TABLE 1—TRAFFIC STATISTICS FOR TALGO OPERATIONS, 1952

	Madrid-Hendaye	Irun-Madrid	Total
1. Number of trips	157	157	314
2. Miles per trip	397.4	396.2	793.6
3. Train-miles	62,398	62,203	124,601
4. Total number of passengers	24,133	24,000	48,133
5. Average number of passengers per trip	153.71	152.86	153.29
6. Average number of seats available	148.6	148.4	148.5
7. Passenger-miles	6,839,133	6,821,618	13,660,751
8. Seat-miles	9,271,480	9,232,174	18,503,654
9. Passengers for complete trip (7÷3)	109.60	109.66	109.63
10. Average miles per passenger (7÷4)	283.4	284.2	283.8
11. Coefficient of utilization [(7÷8 or (9:6) x 100)], per cent	73.76	73.89	73.83
12. Maximum seats occupied average trip	121	121	—
13. Coefficient of maximum seats occcupied [(12÷6) x 100)], per cent	81.42	81.53	—

TABLE 2—SPEED OF TALGO, 1952

	Madrid-Hendaye	Irun-Madrid
Distance, miles	397.4	396.2
Time, train in motion, hr.-min.	8-9	8-39
Time, train not in motion, hr.-min.	1-9	0-26
Total time, hr.-min.	9-18	9-5
Ave. speed in motion, m.p.h.	48.8	45.9
Ave. speed overall, m.p.h.	43.4	43.6

traveled was 284 miles and the utilization factor (the ratio of seats occupied to seats offered) averaged 74 per cent.

Although the majority of passengers on the Talgo make the complete run (occupying 110 of the 148.5 seats on the average run), there are a number of passengers for Bilbao who ride the Talgo between Madrid and Mirando de Ebro, the junction point for Bilbao. This means there are vacant seats on the Talgo between Miranda and Irun. The minimum journey for which a ticket will be sold is 200 km. (125 miles).

The statistics indicate considerable success in building up patronage for the Talgo run. The question naturally arises as to whether the Talgo has robbed other train traffic. The Spanish rail officials answer "yes," but add that the Talgo has attracted traffic that would not otherwise have moved by rail. This has been confirmed by a passenger questionnaire survey conducted on Talgo runs. Many passengers between Paris and Madrid have deserted air travel for the comfort and speed of the journey by rail.

Speed of the Talgo

The Talgo locomotives are geared for a maximum speed of 105 m.p.h. The highest speed the trains have reached in Spain was 92 m.p.h. Operating speeds for the train for 1952 are shown in Table 2. It should be noted that the Talgo operates in rugged country with no long stretches of straight, level track. Elevation varies from sea level at San Sebastian to 4,500 ft. at La Canada.

From the latest timetable the average speed of the run from Madrid to Irun figures out at 47 m.p.h., including 10 station stops en route. Speed limit for operating the Talgo has been set at 75 m.p.h. (120 km.).

For the year 1952 the Talgo achieved an on-time record of 97.7 per cent. From Table 3 it will be seen that delays due to the Talgo train, itself, were relatively low, but delays due to slow orders for track repair, waits for the connecting train at Irun, etc., were greater. However, much of the lost time due to these delays was made up by the Talgo.

Meals are served in airplane style from kitchenettes in the equipment units to the passenger at his seat. Food is in great abundance. The quality of food, as experienced by this writer, was comparable to that served in a de luxe Spanish hotel. The price of the four-course dinner is about $1.25. Of all passengers riding the Talgo in 1952, 70 per cent ate meals, according to statistics issued on Talgo operations. (See Table 4.)

LOOKING THROUGH five units of the Spanish Talgo train.

The day the author rode the Talgo, the train consisted of diesel locomotive and 13 air-conditioned units. From front to rear, the train in sequence included two baggage units, two passenger units, an equipment unit, five passenger units, a second equipment unit, another passenger unit, and the observation lounge. The second baggage unit is a former passenger unit now without seats. Experience dictated the need for additional baggage space. Normally an equipment unit is placed in the center of four 16-passenger units, thus serving 64 passengers. One extra passenger unit was being carried to meet traffic demands. The equipment unit contains the kitchenette, toilet facilities, wardrobes for passengers' coats (checked by an attendant as one boards the train), and air-conditioning equipment. The Talgo carries no mail or express.

The train crew of five included an engineman, a fireman, a "mechanic-on-board," a conductor, and one trainman. In addition, the Wagon-Lits Company, operating the dining service, provided seven men. Each equipment car carried a chef and two waiters. An additional Wagon-Lits employee served as supervisor.

Right-of-Way

With the exception of 43 miles of single track between Miranda and Alsasua, the entire line between Madrid and Irun is double track. Operation is left-hand. Rock ballast is used throughout. The weight of rail is 86.4 lb. per yd.

One of the greatest difficulties facing the Spanish Railways is replacement of ties—not available in the quantities deemed necessary. Oak ties from national forests in Spain are used to the extent that they can be supplied.

Continuous welded rail has very recently been installed on a section of track near San Sebastian over which the Talgo operates.

Block signals are installed between Madrid and El Escorial (32 miles) and between Alsasua and Irun (63 miles). Elsewhere on the run of the Talgo color-light home signals are installed. There is no cab signal equipment on the Talgo. Train orders are used only in the event of an accident or when work is in progress on the line.

TABLE 3—ON-TIME PERFORMANCE OF TALGO, 1952

Time lost due to engine and cars, per 100 km., min.	0.94
Time lost other than Talgo train, per 100 km., min.	6.93
Total time lost, per 100 km., min.	7.87
Time gained by Talgo, per 100 km., min.	5.90
Net time lost, per 100 km., min.	1.97
On time performance, per cent	97.72

TABLE 4—DINING SERVICE ON TALGO, 1952

Total meals served	33,872
Ave. number meals served per trip	107.8
Number of passengers served meals, per cent	70.3

Routine inspections are made by the "mechanic-on-board" for hot bearings, proper functioning of air-conditioning equipment, etc.

At Irun, before the Talgo returns to Madrid, a routine 1,000-km. inspection is made of running gear, brake pressures, etc. Other inspections prescribed by the Spanish Railways are made after 2,500 km. and after 5,000 km. With three round trips per week for both trains, each Talgo train ordinarily spent two days in the shops between trips. Time, therefore, was adequate for complete maintenance. Actually, the running gear and brake equipment are considered much easier to maintain than orthodox passenger equipment.

An overall operating cost of about two-thirds the expense of standard rail equipment has been reported. While pointing out the low labor costs in Spain and the difficulties of converting pesetas to dollars, Talgo officials gave a figure of 42 pesetas per kilometer as the overall operating charges. These include all operating expenses and charges for servicing, maintenance, insurance, development and rent. This is equivalent to about $1.60 per mile. The daily maintenance of the locomotive and 16 units is five pesetas, 10 centimos per kilometer—about 12 per cent of the overall charges.

While reluctant to discuss costs in terms of dollars and

cents, the Talgo officials stated that operating costs per car-mile are considerably lower than costs for operating standard equipment in Spain.

However, for the present Talgo train costs per train-mile include the important factor of amortization. This is high because the trains are prototypes and have, of necessity, incorporated research expenses.

With a supplementary fare imposed to ride the Talgo, tariffs are about 30 per cent higher than equivalent first-class fares. The justification for this is that the higher fare is charged in order to cover all costs—not only operating expenses, but introduction costs as well. Behind this is the reasoning that if the public reacts favorably in spite of high fares, then it will be sure to welcome additional Talgo units on which lower fares can be charged.

In three years' time the Talgo has been in two accidents. In neither accident was there structural damage to the cars, nor did cars overturn, proving in the minds of the Talgo people the structural worthiness of the Talgo construction. No deaths or injuries resulted to passengers or crew. The Talgo has had no grade-crossing accidents.

The present speed of the Talgo, with only minor alterations in schedule, is likely to be maintained. The two ruling factors in determining operating speed are safety and comfort. It is believed that the Talgo has, in effect, no upper limit to the speed of safe operation, because of its low center of gravity and the principle of "guided axles," making derailments on curves unlikely. However, with Spanish roadbed needing further improvement, comfort of passengers might suffer unduly with increased speed.

Talgo officials are of the opinion that three years of service has shown the practicability of the Talgo design. They point out that operating costs are favorable and maintenance expenses are a minimum. Public acceptance of the Talgo trains has come up to every expectation. The Talgo has the advantages of cleaner, faster and more comfortable rail transportation.

Opinion of Renfe officers is that, if capital should become available, they may some day operate a fleet of Talgo trains on all main lines throughout Spain.

[The author wishes to acknowledge the help and the courtesy with which he was received in Spain by Jose M. Garcia-Lomas, director of Renfe; Alfredo Moreno, associate director of Renfe; Martinez de Torres, chief engineer of diesel power of Renfe; Bernando Heyden, assistant director of Patentes Talgo, and Francisco Heredia, engineer, Patentes Talgo.]

"Keep Charges Down," Say Shippers

"Time-lag" legislation and pick-up and delivery charges livest subjects at National Industrial Traffic League annual meeting

Mounting opposition to any further increase in transportation rates or charges was the dominant tone of the 46th annual meeting of the National Industrial Traffic League held in New Orleans November 19 and 20. The meeting was marked by a near-record attendance of over 625 shippers.

Commenting that "this is the year of transportation statesmanship," Commissioner James K. Knudson of the Interstate Commerce Commission, administrator of Defense Transportation, opened the meeting with some informal remarks. "This country needs from 80,000 to 100,000 additional freight cars," Mr. Knudson told the gathering. "Yet the railroads' orders for new cars continue light. We hope the railroads will come across with a program to provide replacements and to add additional cars to the national fleet. If these orders are not forthcoming, the railroads cannot reasonably expect fast-write-off tax amortization of freight cars to continue.

"If the railroads do not order the cars, it may be that we will have to work out some plan for governmental ownership of cars. But I emphasize that this does not mean we are thinking in terms of governmental ownership of the railroads."

Easily the "hottest" subject at the meeting was the so-called "time-lag" legislation—or, as it is dubbed by some shippers, the "quickie rate increase bill"—now before Congress. At previous meetings the league had voted to support such legislation as necessary to assist the railroads in receiving within reasonable time, revenues needed to meet rising wage and material costs. However, during the past year opposition has grown to the idea of having the league support such legislation. This opposition is apparently founded on the belief that it would "strengthen the brotherhoods' demands for wage increases, and would weaken the railroad industry's will to resist."

Some shippers seem to feel there is a strong possibility the railroads might place in effect larger rate increases than could be supported in full public hearings. The net result of these influences, these shippers believe, would be constantly mounting and excessively high transportation charges.

A motion designed to remove the league from active participation in "time-lag" legislation, and place it on the side lines, was defeated 90 to 74 after almost three hours of continuous and vigorous floor discussion. The membership then followed the recommendations of the Transportation Outlook and Policy, the Legislative, and

the Executive committees that it "reaffirm its position in support of the principles of 'time-lag' legislation to the rail carriers, and other carriers under Part I of the Interstate Commerce Act." It was indicated that the league is inclined to go slow in supporting similar legislation on behalf of other types of carriers because of the belief that such relief is not necessary. But should it become necessary, it was held that the same principles should be made to apply, and that these other carriers be required "to carry the burden of proof before the Interstate Commerce Commission for the increase requested."

It was then voted to support "time-lag" as formulated in Senate bill 1461, with some changes. It was agreed to suggest that the wording of Section 15(b), which establishes standards to govern I.C.C. action, be rephrased to eliminate the words "establish and maintain sound credit, attract equity capital," substituting "to meet increased costs of wages and materials."

The league continues to favor a bill with a refund provision—providing for return of any charges later found excessive by the I.C.C.—"to act as a deterrent to any railroad placing in effect a rate increase larger than could be justified before the commission."

Pick-up and Delivery

It was reported to the meeting that there is apparent activity by the railroads in seeking, in one way or another, increased charges for pick-up and delivery services, or the complete elimination of these services altogether. The railroad proposals so far presented to the league were viewed as "another way of raising the total cost of l.c.l. services to the shipper." The league then voted to "oppose the establishment by railroads, motor carriers, or forwarders of plus charges for pick-up and/or delivery services where such free services have been in effect or are contemplated." It was also voted to enter key cases where important changes in p. & d. services or charges are involved.

The number of new freight cars currently on order was the subject of much discussion. The Transportation Instrumentalities committee reported: "We are much concerned over the dwindling number of new cars on order, and over the prospect of some car building plants having to close due to lack of orders." There followed discussion of Mr. Knudson's frequent comment that if the railroads can't or won't buy sufficient new cars, the government may have to in order to insure an adequate supply. It was the consensus that the league should oppose government ownership of railroad cars for general use by the shipping public, and instead should use every means at its disposal to get the railroads to step up their car orders.

The Rate Construction and Tariffs committee—which has been a prime factor in the railroads' tariff simplification program—reported: "It is doubtful whether we can ever achieve tariff simplification as long as the long and short haul provisions of Section 4 remain a part of the act." It thereupon recommended supporting the railroads' application for relief from these provisions. A lively discussion disclosed the fear of some members that granting this relief would open the door to a variety of rate increases at many local stations. The committee explained the necessity of "getting away from conditions which benefit no one, but which limit desirable routes and seriously complicate tariffs." It went on to say: "The railroads are seeking the use of their managerial judgment as to what routes can be operated profitably in place of the commission's present practice of determining routes on a mathematical basis. The proposed relief should not circumvent or emasculate the fourth section. Rather it should make the section into a more practical and workable package." The league voted to support the railroads' application.

Action was also taken on the following subjects:

- *Transportation tax.* It was voted to support repeal of the federal transportation tax "with the understanding that such repeal will not be used as the basis for further increases in carrier rates."
- *Higher demurrage charges.* A railroad proposal—described as a "fishing expedition"—for increasing demurrage charges from $3 to $5 and $6 to $10, was reported. On the grounds that "the railroads are working against their own interest by trying to turn demurrage charges into a revenue activity," it was voted to adhere to the principle that demurrage charges should reflect only the actual cost of ownership plus a small charge for clerical expense.
- *Extension of credit.* It was voted to ask the railroads to allow seven days' time for the payment of freight charges, that being the length of credit now being extended by motor carriers.
- *Volume rates.* Subcommittees were appointed to work in local railroad rate committee areas to seek establishment of volume l.c.l. rates. A proposal of the Eastern railroads for a special 5,000 lb. rate was received too late to be acted upon at the meeting.
- *Railroad costs.* It was suggested that the railroads "examine the possibility of taking out of the railroad business the investment capital which is unnecessary" in order to reduce the present capital structure. "As shippers," the Cost and Accounting committee reported, "we are all well aware of the fallacy of a pyramiding rail rate structure and its effect on diversion of traffic from the rails, as well as on decentralizing industry to reduce the transportation required."
- *Motor carrier records.* It was voted to work towards having motor carriers come to rate increase cases "with complete figures representing the traffic and revenues of all Class I carriers in the territory, rather than the present practice of using a hand-picked list."
- *Joint motor carrier routes and rates.* The Motor Carrier committee was directed to study ways and means of getting motor carriers to establish and maintain joint routes and rates with other motor carriers.
- *Freight forwarder-motor carrier contracts.* It was reported that existing contracts between freight forwarders and motor carriers for line hauls of more than 450 miles, established for the movement of less-than-truck quantities, are apparently being used to cover the movement of quantities considerably in excess of truck load.
- *Freight car repairs.* Railroad reports of car repairs do not reflect a true picture of actual conditions, the Freight Claims and Claim Prevention committee reported. "Present reports cover only mechanical repairs. Information is lacking as to what the carriers are doing about repairing sidewalls, roofs, and floors. In other words, the carriers should define their repairs."

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Organizations

(*Continued from page 18*)
stores, Lackawanna; and third vice-president, J. L. Cranwell, vice-president, Pennsylvania. P. M. Kelly, comptroller, Jersey Central, continues as treasurer, and A. H. Smith, vice-president and director, Kerite Company, as a member of the finance committee for a three-year term. Reelected as executive members at large for three years were R. G. Sonquist, vice-president, Standard Railway Equipment Manufacturing Company; J. E. Brown, vice-president, Magnus Metal Corporation, and Edward Laterman, district manager, Champion Rivet Company. Mr. Hank succeeds J. A. Schwab, general manager, Eastern region, Pennsylvania.

Supply Trade

What's the Car Builders' Future?

Pullman's Champ Carry optimistic on "long pull"—Puzzled over competition from railroads' own shops—Concerned over possible cutbacks in 1954

In a talk presented to the New York Society of Security Analysts November 19, Champ Carry, president of Pullman, Inc., revealed that, while he is optimistic over the long-term future of commercial railway car building, he is concerned over the present paucity of orders, which may soon have serious repercussions in the form of cutbacks and consequent reduction of the nation's active and available car building forces.

At the outset of his talk, Mr. Carry introduced the presidents of Pullman, Inc.'s three subsidiary companies—Charles W. Bryan, of Pullman-Standard Car Manufacturing Company; Warren L. Smith of the M. W. Kellogg Company, and William A. Burns, of Trailmobile, Inc.

Speaking first of Pullman-Standard and the railway car building business, Mr. Carry said: "There is no question that the irregularity of railroad purchasing leaves a lot to be desired from the standpoint of the carbuilder. The practice of some railroads of building freight cars in their own shops is of serious concern to us, and I do not understand this type of competition. I believe, however, that the railroads generally are becoming more aware of the importance to them of the commercial carbuilding industry, and will support it with business. While several of the railroads fill their own new car requirements to a major extent in their own shops, there are 59 Class I roads—or about one-half the total number—which do not engage in this practice. And there are 28 others which customarily buy over half their requirements from commercial builders. Furthermore, only a few of the carbuilding roads actually manufacture a car to the same degree as a commercial carbuilder; most of them purchase underframes, sides, ends, roofs and other component parts.

"A well-equipped freight car shop is a highly efficient mechanism, as attested by the fact that even in this day of inflation, a box car is built and sold at profit, for less than 15 cents a pound."

Passenger Cars—Touching on passenger cars, Mr. Carry said that in the immediate postwar years, this activity accounted for 23 per cent of Pullman-Standard's total carbuilding billings; but that in the past three years, this ratio has dropped to only five per cent. Presently 325 cars are on the order book, so 1954 deliveries will make a substantial improvement in the ratio.

Replacements—"The outlook for passenger car building is too uncertain to permit any specific forecast . . . but it would appear that there is a large potential replacement market. Under conditions now faced by the railroads, we do not look for a complete or rapid replacement of passenger equipment. However, it has been demonstrated that new cars can be operated profitably on runs where there is sufficient traffic density, and I am sure that this particular basis for a market in passenger cars will continue for many years to come."

Hiatus?—"Probably the most important question before us is 'where are we going from here?'," said Mr. Carry, returning to the subject of freight cars. "We are always looking for information that will help us forecast our order book, and many times it is more difficult to predict the near future than the long-range trend. That is the situation right now. A few months ago I felt reasonably sure the railroads would purchase a substantial number of freight cars before the first of the year. I missed my guess, but I hope they will buy in time to avoid a cutback in our shops which are currently booked into the second quarter of 1954.

"For the long pull, I am optimistic. There seems to be general agreement that there will be a continuing increase in gross national product. In the past, the volume of land freight transportation has closely followed the trend of gross national product. The freight traffic handled by the railroads, therefore, is bound to increase and to require a minimum fleet of 1,850,000 cars—the present goal of the industry. This would involve some 80,000-odd more cars which, added to the normal replacement of 657,000 existing cars over 25 years old, should result in a healthy freight car building industry. Personally, I believe technological developments, specialized equipment, and the growth of rail-highway coordination will not only speed up the replacement program, but will require a fleet in excess of the 1,850,000 cars now projected."

John A. Matousek, vice-president, manufacturing, of the **Baker-Raulang Company,** has been named vice-president and general manager. **Russell A. Moore** has been appointed field applications engineer, specializing in side-loading fork truck applications, and will be available as consultant on general materials handling problems. He was formerly group engineer for **Bell Aircraft Corporation.**

Hunter Illuminated Car Sign Company and **Hunter Sash Company,** Flushing, N.Y., have opened an office at 80 East Jackson boulevard, Chicago, for sales, service and engineering in the Middle West area, in charge of **Charles A. Brooks.**

Air Filter Sales & Service Co., San Francisco, has been appointed sales and service representative for northern California for the **Farr Company.**

The **Okonite Company** has expanded its top-level management organization, creating the new post of

FRED E. GREGER, who has been named sales manager of Standard Steel Works division, Baldwin-Lima-Hamilton Corporation, at Burnham, Pa. He has been western sales manager for the Hamilton division of the company at Chicago since 1950.

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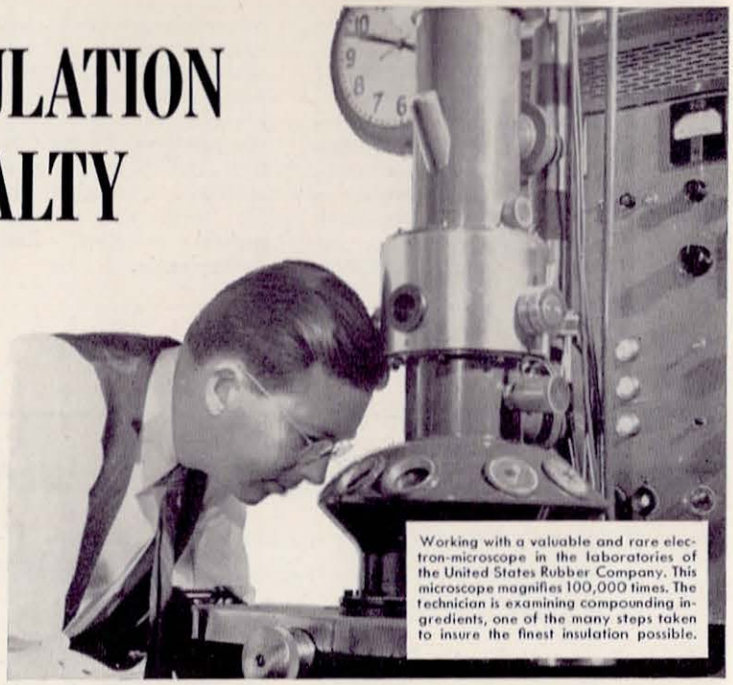

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Ozone-resistant for high-voltage applications in wet or dry locations.

"U.S." USKORONA-NEOPRENE POWER CABLES offer to the exacting railway industry an unbeatable reliability on overhead and underground high-voltage power applications on circuits up to 8000 volts between phases and at conductor temperatures up to 75 C. They will not crack after 3 hours in air containing .015 per cent ozone. Light in weight, easy to install and join, resistant to oil, heat, sunlight, flame, acids, alkalis and corrosive chemicals. USKORONA-NEOPRENE cables also eliminate electrolysis. The following are guaranteed test values:

PHYSICAL AND AGING PROPERTIES (MINIMUM VALUES)

	Uskorona			Neoprene Jacket	
	Unaged	After 96 Hrs. O.B.	After 7 Day Geer Oven	Unaged	After 96 Hrs. O.B.
Tensile Lbs./Sq. In.	500	450	450	1800	1600
Elongation Per Cent	250	200	200	300	250

MOISTURE RESISTANCE (MAXIMUM VALUES)

Dielectric Constant and Power Factor of the insulation after immersion in water at 50 C.: Dielectric Constant, one day is 4.5; per cent gain, 1 to 14 days is 5.0; per cent gain, 7 to 14 days is 2.0; Power Factor, per cent, one day is 3.0; Stability Factor 40-80 volts/mil two weeks, per cent is .5.

U.S.RUBBER
SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

ELECTRICAL WIRE & CABLE DEPT. • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

chairman of the board and emphasizing the area of research and product development. **Albert F. Metz** has been elected chairman of the board and chief executive officer; **R. Stuart Keefer,** president, and **Edward D. Youmans,** vice-president in charge of research and product development. They were formerly, respectively, president, vice-president—sales, and vice-president—manufacturing and research. **Charles M. Kirkland,** factory sales manager at Passaic, N. J., has been promoted to vice-president—sales, and **David W. Nurse,** previously resident manager of the Wilkes-Barre, Pa., plant, has been named vice-president in charge of manufacturing for the company's three factories.

Continental-Diamond Fibre Company has appointed **O. E. Anderson** as technical service representative for its Silicone, Teflon and Polyester flexible sheet and tape products. Mr. Anderson was with the Micarta division of **Westinghouse Electric Corporation** for more than 24 years.

The **Electro-Motive Division of General Motors Corporation** will establish a new factory branch for rebuilding principal locomotive components at North Salt Lake City, Utah, late in 1954. Construction of the new plant will begin next spring. It will consist of an office building 66 ft. square and a 156-ft. by 300-ft. factory building—both one story, of brick, concrete, steel and glass construction. The plant will be located on a 16-acre plot adjoining Union Pacific trackage on the south side of 6500 South st., North Salt Lake. The branch plant will serve railroads in northwest territory, roughly from Denver to the Pacific.

The branch will be equipped to rebuild worn engines, generators, and traction motors with the same materials, methods and machinery used in manufacture of new components at parent factories. Delivery of rebuilt components will include the same guarantee that Electro-Motive gives on new engines, generators or traction motors, according to a company spokesman. E.-M. D. factory branches are presently located at Emeryville, Cal.; Los Angeles; Robertson, Mo.; La Grange, Ill.; Halethorpe, Md.; and Jacksonville, Fla.

New Facilities

Canadian Pacific. — Company forces will build a 3,000-ton icehouse at Newport, Vt. To be constructed largely of concrete and creosoted lumber, the new building will include an electric ice crusher and electric elevators and conveyors. It will replace an older icehouse near the Newport passenger station.

Chesapeake & Ohio.—Will install a traffic control system on its Pere Marquette district, between Ludington, Mich., and Saginaw. Equipment will be furnished by the General Railway Signal Company.

Chesapeake & Ohio.—New ground will be broken shortly for an addition to the C&O hospital in Clifton Forge, Va. The five-story structure, to be known as the East Wing, will cost an estimated $850,000 and is expected to be completed in about one year. The construction contract has been awarded to J. M. Turner & Co., Roanoke, Va.

Santa Fe. — Demolition of coal chutes at St. John, Kan., and Syracuse, Trinidad, Colo., and Las Vegas, N. M., and Lamy, will be handled by the McCarthy Improvement Company, Davenport, Iowa, under contract.

Equipment & Supplies

CNR Orders 60 Cars Costing $2,684,000

The Canadian National has ordered 60 baggage and freight cars costing approximately $2,684,000. The National Steel Car Corporation will build 30 baggage cars and the Eastern Car Company 15 30-ton steel stock cars (for Newfoundland service), and 15 50-ton air-dump cars.

LOCOMOTIVES

1,839 Locomotive Units Installed in 10 Months

Class I railroads installed 1,839 new locomotive units in the first 10 months of 1953, compared with 2,667 new units in the comparable period last year, the Association of American Railroads has announced. Installations this year included 1,822 diesel units and 13 steam and four gas turbine-electric locomotives, while installations in the first 10 months of 1952 included 2,644 diesel units and 15 steam, two electric and six gas turbine-electric locomotives.

October 1953 installations totaled 156 units, all diesels except for one steam locomotive, compared with installations in October last year of 248 diesel units and two steam locomotives.

Class I railroads had 630 new locomotive units on order November 1, including 603 diesel units and two steam, 10 electric and 15 gas turbine-electric locomotives, compared with 1,030 new units on order on the same 1952 date, which included 992 diesel units and 19 steam and 19 gas turbine-electric locomotives.

The **State Railways Administration of Uruguay** has ordered 38 diesel units from the General Electric Company. When deliveries are completed by the end of 1954, the country's railroad system will be 100 per cent dieselized, which, it is believed, will make Uruguay the first country in the world with a fully dieselized railroad system. Included in the present order are 27 1,400-hp., seven 400-hp., and four 150-hp. units.

IRON & STEEL

The **Louisville & Nashville** has authorized purchase of 40,000 net tons of 132-lb. rail and necessary track fastenings at an approximate cost of $6,000,000. The rail and tie plates will be manufactured at the Ensley, Ala., plant of the Tennessee Coal & Iron division of the U. S. Steel Corporation.

The **New York Central** has ordered 3,400 net tons of rail from the Algoma Steel Corporation for use on Michigan Central track in Canada. This order is in addition to that reported on page 15 of last week's *Railway Age*.

Securities

Applications

NEW YORK, NEW HAVEN & HARTFORD.— To assume liability for $6,600,000 of series A equipment trust certificates, first installment of a proposed $13,200,000 issue. The entire issue would be used to finance in part acquisition of 100 passenger-train cars costing an estimated $17,600,000, as follows:

	Description and Builder	Estimated Unit Cost
89	multiple-unit passenger coaches (Pullman-Standard Car Manufacturing Company)	$175,000
7	multiple-unit combination passenger and baggage cars (Pullman-Standard)	178,500
3	multiple-unit club cars (Pullman-Standard)	193,000
1	multiple-unit buffet club car (Pullman-Standard)	196,500

The present issue of certificates would be dated January 1, 1954, and would mature in 15 annual installments of $440,000 each, beginning January 1, 1955. They would be sold by competitive bidding, with interest rate to be set by such bids.

ST. LOUIS-SAN FRANCISCO.— To assume liability for $7,500,000 of series M equipment trust certificates, to finance in part five diesel units and 1,200 freight cars costing an estimated $9,636,218:

	Description and Builder	Estimated Unit Cost
5	1,500-hp. freight booster units (Electro-Motive Division, General Motors Corporation)	$158,232
100	50-ton flat cars (American Car & Foundry Co.)	6,208
200	95-ton open-top ore cars (Pullman-Standard Car Manufacturing Company)	10,483
300	55-ton hopper cars (Pullman-Standard)	6,022
500	50-ton box cars (Pullman-Standard)	6,626
50	50-ton box cars (Pullman-Standard)	11,216
50	50-ton box cars (Pullman-Standard)	8,948

The certificates, to be dated January 1, 1954, would mature in 15 annual installments of $500,000 each, beginning January 1, 1955. They would be sold by competitive bidding, with interest rate to be set by such bids.

Dividends Declared

BEECH CREEK.—50¢, quarterly, payable January 2, 1954, to holders of record December 4.

ERIE & PITTSBURGH.—87½¢, quarterly, payable December 10 to holders of record November 30.

MOBILE & BIRMINGHAM.—4% preferred, $2,

semi-annual, payab'e January 2, 1954, to holders of record December 1.

NEW YORK, CHICAGO & ST. LOUIS.—6% preferred A, $1.50, quarterly, payable January 2, 1954, to holders of record November 27.

NEW YORK & HARLEM.—common $2.50, semi-annual; 10% preferred, $2.50, semiannual, both payab'e January 2, 1954, to holders of record December 11.

PHILADELPHIA, GERMANTOWN & NORRISTOWN.—$1.50, quarterly, payable December 4 to holders of record November 20.

SOUTHERN PACIFIC.—75¢, quarterly, payable December 21 to holders of record November 30.

TROY & GREENBUSH.—class A, $1.75, semi-annual, payable December 15 to holders of record December 1.

Security Price Averages

	Nov. 24	Prev. Week	Last Year
Average price of 20 representative railway stocks	59.11	58.92	65.85
Average price of 20 representative railway bonds	90.70	90.98	93.90

Financial

Augusta Union Station Company.—*Lease.* — The Atlantic Coast Line, the Charleston & Western Carolina, the Georgia Railroad and the Southern have asked the I.C.C. to approve an agreement under which these roads would continue joint use of Union Station facilities at Augusta, Ga. The new agreement would run to April 1, 1980, and rental paid by each road would be determined on a user basis.

Bonhomie & Hattiesburg Southern.—*Control.*—Four individuals who own the 44-mile Fernwood, Columbia & Gulf have applied to the I.C.C. for authority to acquire control of the 26-mile B&HS. Both roads are located in Mississippi, and are not directly connected. The Tatum Lumber Company, which owns the B&HS, has agreed to sell for $200,000. The prospective new owners claim that rehabilitation of the line will lead to increased traffic.

Florida East Coast.—*Reorganization.*—Division 4 of the I.C.C. has approved the payment of $25,000 annually as compensation for John W. Martin, trustee of this road. The district court has appointed Mr. Martin sole trustee of the FEC since the death of Scott M. Loftin, who served as co-trustee.

Reconstruction Finance Corporation.—*Railroad Holdings.*—Obligations held by the defunct R.F.C. include $85.9 million in railroad securities. The agency terminated its lending operations September 28, and has until June 30, 1954, to liquidate securities totaling more than $1 billion. In making public a list of its holdings, the R.F.C. last week stated that negotiations for disposal of these holdings are now under way.

Among the present R.F.C. railroad holdings are $65 million of Baltimore & Ohio 4 per cent collateral trust bonds, due January 1, 1965; $10,571,000 of Erie income mortgage 4½ per cent bonds, due January 1, 2015, and a $5,306,102 promissory note of the Tennessee Central.

The $85.9 million in railroad obligations held by R.F.C. is but a small portion of the $940 million in railroad loans which the agency handed out during its lifetime. In addition, the R.F.C. took over another $200 million in railroad loans during the depression when the Public Works Administration was terminated.

Investment Publications

[The surveys listed herein are for the most part prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, *Railway Age* lists them as a service to its readers, but assumes no responsibility for facts or opinions which they may contain bearing upon the attractiveness of specific securities.]

Argus Research Corporation, 61 Broadway, New York 6.
Louisville & Nashville Railroad. November 16.

Baker, Weeks & Co., One Wall st., New York 5.
Is the Weakness in Railroad Stocks Justified? September 30.

Fahnestock & Co., 65 Broadway, New York 6.
Chesapeake & Ohio Railway Co. Weekly Review, November 9.
Illinois Central Railroad Co. Weekly Review, October 26.

McMaster Hutchinson & Co., 105 S. LaSalle st., Chicago 3.
Railroad Equipment Trust Certificates, A Discussion of the Fundamental Principles of Equipment Trust Financing from the Investor's Viewpoint. Revised edition.

L. F. Rothschild & Co., 120 Broadway, New York 5.
Chicago, Rock Island & Pacific Railroad Company. Investment Letter, November 12.

Smith, Barney & Co., 14 Wall st., New York 5.
Illinois Central Railroad Company. Railroad Bulletin No. 144, October 6.
Railroad Earnings. Railroad Bulletins No. 145, October 13, and No. 146, November 10.

Vilas & Hickey, 49 Wall st., New York 5.
Central of Georgia. October.

Railway Officers

L. A. Evans Named Chief Of Two Chicago Roads

Lewis A. Evans, vice-president and general manager of the Chicago & Western Indiana and the Belt Railway of Chicago, has been elected president of both companies. He succeeds Michael F. Stokes, who retires December 1 after more than 40 years of service with the two companies.

CANADIAN NATIONAL. — **Edward A. Ryder,** freight traffic manger at Toronto, has been appointed assistant general freight traffic man-

Edward A. Ryder

Edward R. Dalrymple

ager at Montreal, and **Edward R. Dalrymple,** general freight agent, has been named freight traffic manager of the Central region, with headquarters as before at Toronto.

W. B. Jackson, division engineer at Cochrane, Ont., has been transferred to London, Ont., succeeding **E. T. Cove,** who has been transferred to St. Thomas. **C. D. Midwinter,** assistant division engineer at Belleville, succeeds Mr. Jackson at Cochrane.

CENTRAL VERMONT.—**Cecil J. Shapland,** assistant engineer in charge of the bridge and building department at St. Albans, Vt., will retire November 30 under the pension rules of the company, after 42 years of railroad service, 40 of which were with the CV.

CENTRAL VERMONT — CANADIAN NATIONAL.—**John W. Edwards,** special traffic representative at Boston, has been appointed assistant general freight agent, sales, at St. Albans, Vt.

CHESAPEAKE & OHIO.—**K. T. Reed,** general superintendent at Peru,

Ind., has been appointed assistant general superintendent, Western General division, at Covington, Ky. **S. G. Waite,** assistant division superintendent at Covington, has been appointed superintendent of the Cincinnati—Chicago division at Covington, succeeding **H. A. Iuler,** retired. **R. N. Lynch,** trainmaster at Peru, has been appointed assistant superintendent, Clifton Forge division, at Clifton Forge, Va., succeeding **W. K. Weaver, Jr.,** who has been appointed assistant superintendent—trainmaster of the Cincinnati—Chicago division at Peru, having jurisdiction from Cheviot, Ohio, to Chicago.

Howard Skidmore has been named director of public relations and advertising. For the past three years Mr. Skidmore has been executive assistant to **Thomas J. Deegan, Jr.,** vice-president—passenger traffic and public relations, at Cleveland.

ERIE.—Howard M. Shepard has been named assistant chief engineer—

Howard M. Shepard

engineering at Cleveland, as announced in *Railway Age* October 26.

James M. Moonshower, trainmaster of the Allegany and Bradford divisions at Salamanca, N.Y., has been appointed assistant superintendent of the Marion division at Chicago, succeeding **Edwin J. Robisch,** whose promotion to superintendent at Salamanca was announced in *Railway Age* November 9. **Charles H. Zimmerman,** inspector of operation, Western district, at Youngstown, Ohio, has been appointed trainmaster of the Kent (Ohio) division, succeeding **James W. Connor,** who has been transferred to the Meadville and Buffalo and Southwestern divisions at Meadville, Pa. Mr. Connor replaces **James G. Ainey,** who succeeds Mr. Moonshower at Salamanca.

FRISCO. — V. R. Copp, resident engineer at Springfield, Mo., has been appointed special engineer at that point. **P. M. Bodine,** engineer of design there, has been named construction engineer, while **C. E. Phillips,** assistant engineer, succeeds him.

Appointed as supervisor freight loss and damage prevention, at Springfield, is **A. E. Kerr.**

MONON.—Frank Meyers has been appointed industrial agent at Chicago.

NEW ORLEANS PUBLIC BELT.—J. O. Kirschenheuter, superintendent transportation at New Orleans, will retire December 1. Named to succeed him is **C. J. Laigast,** assistant superintendent transportation, who will be succeeded in turn by **H. S. Walker,** night general yardmaster.

NORTHERN PACIFIC.—J. A. Marshall, general agent at Atlanta, Ga., has been appointed assistant general freight and passenger agent at Billings, Mont., succeeding **Howard H. Ellsworth,** who is retiring. Named to replace Mr. Marshall is **O. W. McLaughlin,** foreign freight agent at Portland, Ore., who in turn has been succeeded by **C. E. Moehring,** city freight and passenger agent at that point. Named as general agents of newly established general agencies at Helena, Billings, Butte and Missoula, Mont., respectively, are **R. L. MacLean, M. J. Delmore, R. E. McCourtney** and **E. J. Stiles.**

PENNROAD CORPORATION.—Robert E. Thomas, who joined the executive staff last June 15, (*Railway Age* June 15, page 16), has been elected a vice-president.

SOUTHERN.—Charles M. Davison, Jr., general solicitor, has been elected comptroller at Washington, D. C., succeeding **T. H. Seay,** who will relinquish that post December 31, at his own request. Mr. Seay will continue with the Southern as executive consultant. Mr. Davison was born June 19, 1914, at Richmond, Va., and

Charles M. Davison, Jr.

attended the University of Virginia (LL.B., 1937). After engaging in the general practice of law, Mr. Davison served as attorney in the U. S. Treasury Department, resigning in 1941 to resume general law practice. In January 1947 he was appointed general tax attorney of the Southern at Washington and was promoted to general solicitor December 1, 1951.

William D. McLean, tax commissioner at Atlanta, has been appointed general tax attorney at Washington, effective January 1, 1954. **Robert G. Pruitt,** assistant tax commissioner, will succeed Mr. McLean as tax commissioner. **Homer T. Brewer,** tax agent, will become assistant tax commissioner, succeeding Mr. Pruitt.

SOUTHERN PACIFIC.—W. G. Peoples, assistant vice-president, system freight traffic, has been appointed vice-president, system freight traffic at San Francisco, succeeding **W. W. Hale,** who will retire December 31 (*Railway Age*, November 23, page 38). Mr. Peoples was born at Opp, Ala., September 26, 1899, and after service with the Louisville & Nashville, joined

W. G. Peoples

the SP in 1920 as traveling agent at Birmingham, Ala. He later served successively as traveling freight and passenger agent at Birmingham, general agent at Atlanta, assistant general traffic manager at Chicago, freight traffic manager at New York and San Francisco, and assistant vice-president of system freight traffic, being appointed to the latter position in August 1947.

C. J. Astrue, assistant chief engineer at San Francisco, has retired.

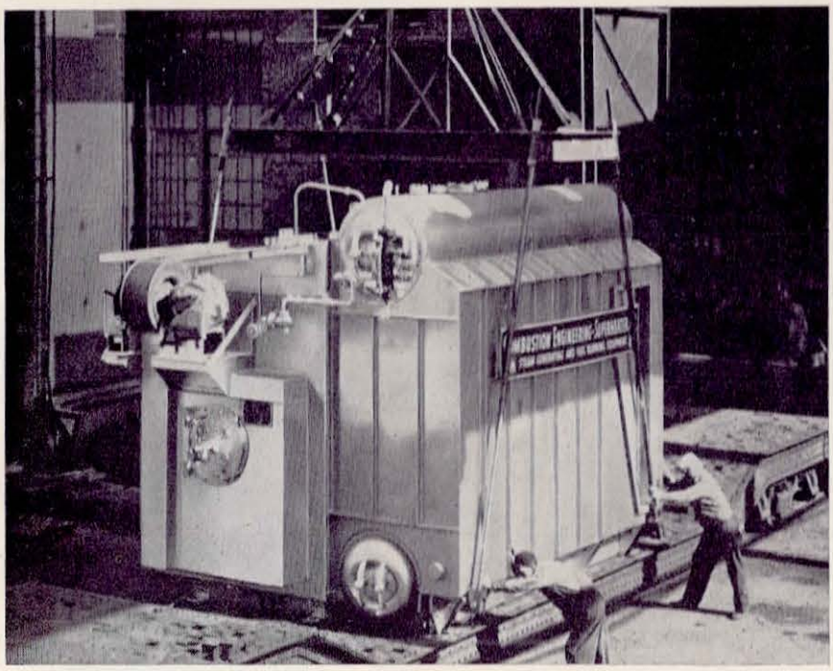
OBITUARY

E. H. Bunnell Dies

Edward H. Bunnell, 71, retired vice-president in charge of the Finance, Accounting, Taxation and Valuation Department of the Association of American Railroads at Washington, D.C., died November 19 at George Washington Hospital. A biography and photograph of Mr. Bunnell were published in *Railway Age* March 17, 1952, page 114.

Leland Clapper, retired chief engineer of the **Duluth, Missabe & Iron Range,** died November 19 at Tulsa, Okla.

A Package Boiler With *Many* Advantages



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Letters from Readers

A Customer's Viewpoint

ELIZABETHTOWN, N. Y.

TO THE EDITOR:

As a railroad amateur, but a fairly consistent rail traveler, I was interested in your article in the October 12 *Railway Age* by Betty Barton. . . .

I venture three suggestions:

1. Many railroads have "Travel Bureaus" and these will do away with station ticket office difficulties if used more generally. . . .

My suggestion is that few ordinary travelers ever heard of these bureaus, they are used for the most part by businessmen. Nevertheless, the railroads would do well to publicize this Travel Bureau service in some way—perhaps a page in the timetable—they would know better than I. You would be surprised to know how many people I have told about this service, people who had been disgusted with delays at the ordinary window. If practicable, I would suggest all long distance purchasers be referred to the Bureau. . . .

2. There is no question in my mind that the most comfortable way to travel is in the new lightweight Pullmans. A double bedroom, or for man and wife a double bedroom suite, is luxury unheard of even 15 years back. However, a lot of damage is done by railroads "mixing" such cars with the old fashioned Pullmans. It is ridiculous to suppose the old Pullmans can all be immediately replaced. Present costs are too high per car; it must be done slowly. However, where it is necessary to mix equipment, it is folly to put a new car between two old fashioned Pullmans. The passengers in the new car will get a jolting, the like of which can convince them that the risk of plane travel is as nothing to such a night's ride. It seems to an amateur that any additional switching expense to get lightweight cars in a mixed equipment train all in a row would be repaid ten times. . . .

3. I would suggest that the last advance in passenger fares was too great. Of course, one cannot blame the railroads' passenger people for experimenting to get the net highest revenue they can, provided it does not further reduce the amount of rail travel. But I think this last raise went over the limit. I think that on trips up to and even over 200 miles, the bus benefited, not the railroad, from the last advance. Apparently, the roads have come to the same conclusion, for I see "family rates," etc., at reductions. I believe a slight reduction, well advertised, would replace a lot of bus travel for intermediate distances, and even an appreciable amount of long-distance travel driven to the planes. I may be wrong; the passenger people should know, but as a passenger, I do think they went too far the last time.

W. HUSTACE HUBBARD

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The ABC symbol displayed on this page stands for "Audit Bureau of Circulations," a cooperative association of advertisers, advertising agencies and publishers for the verification of circulation.

Once a year ABC's auditors make available a detailed, accurate, verified account of paid subscriptions to *Railway Age*: who and where they are . . . how many they add up to . . . what their titles, their work and, consequently, their job interests are . . . and many more facts that check and double check the *exact number* and the *exact kind* of subscribers we are reaching.

Editorially, our main objective is to help *you* do your job quicker, more efficiently, and at a greater profit. With the ABC audit, we have impartial confirmation of the soundest formula for selecting and publishing the kind of articles and features in which you have a marked on-the-job interest. Guided by the ABC audit, *Railway Age's* editors work *expressly for you.*

The same detailed check which guides our editors in being of greater service to you also helps our advertisers. They, like the editors, take the ABC audit seriously. Knowing the facts helps them to tell you how to do a job faster, better and, again, at a greater profit. That's why the ads in *Railway Age* constitute such a valuable supplement to the editorial content.

Yes, in both our editorial and advertising pages, you're in the driver's seat—very important people!

In addition to the ABC audit, the fact that you *pay* for our publication helps to keep us on our toes. Because you respect *Railway Age* enough to pay for it, we, in turn, must produce a business paper that continually *earns* that respect. *The fact that more and more of you railroad men are adding your names to our circulation rolls, shows that our efforts are successful!*

If by any chance, you are not numbered among our list of very important people —our *Railway Age* subscribers . . . if perchance, you're reading someone else's copy—why not become a full-fledged *Railway Age* subscriber *today!* Let this service work for you regularly every week!

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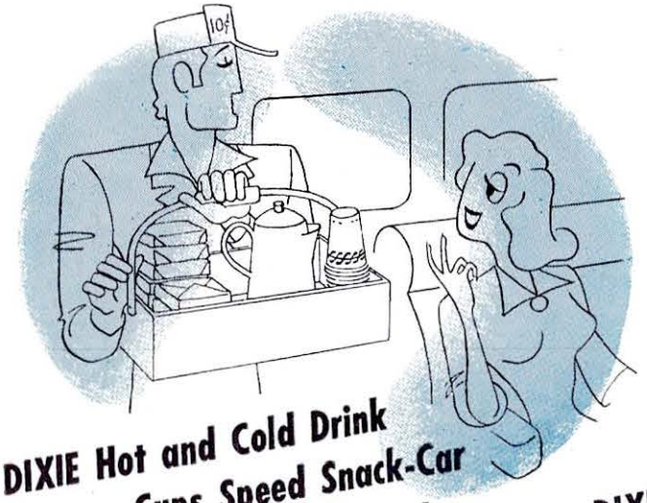

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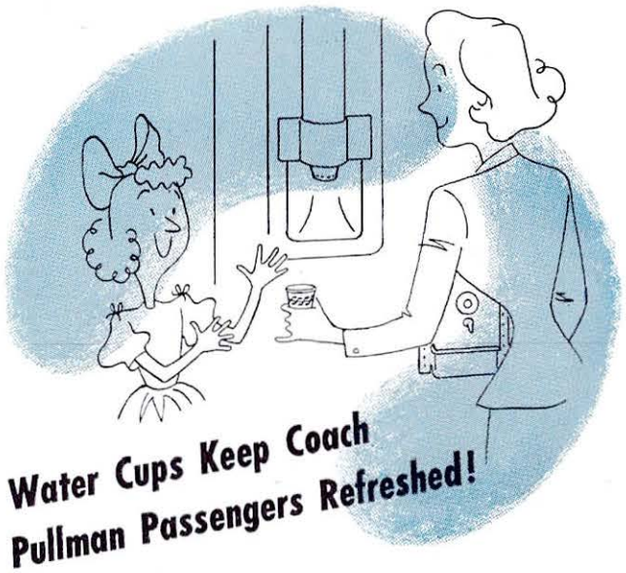

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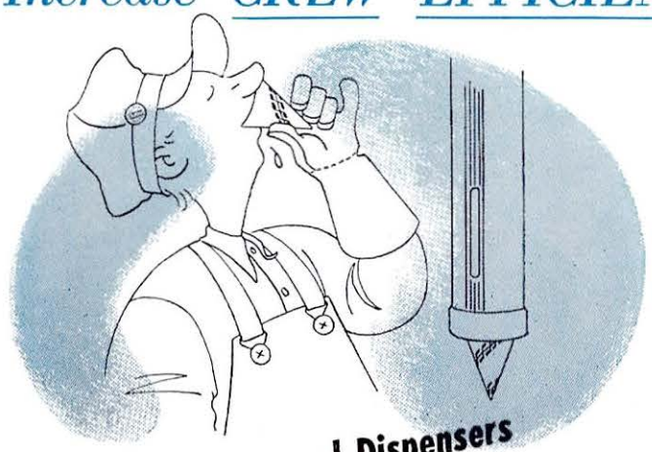

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